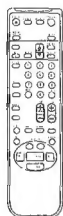


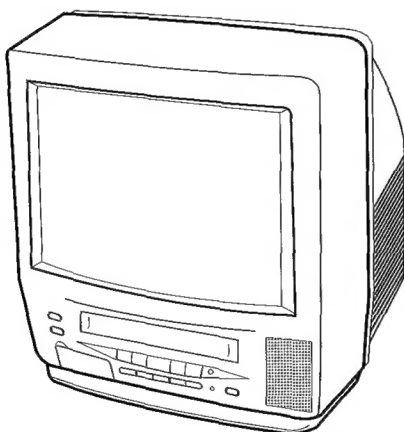
SERVICE MANUAL DAW-1 CHASSIS

<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>
KV-13VM40	RM-Y153	US	S10B-A
		Canadian	S11B-A
KV-13VM41	RM-Y153W	US	S10C-A
KV-20VM40	RM-Y153	US	S10D-A
		Canadian	S11A-A
KV-20VS40	RM-Y153	US	S10A-A
		Canadian	S11C-A
KV-13VM42	RM-Y153	US	S10F-A
		Canadian	S11E-A
KV-13VM43	RM-Y153W	US	S10G-A
KV-20VM42	RM-Y153	US	S10E-A
		Canadian	S11D-A
KV-20VS42	RM-Y153	US	S10H-A
		Canadian	S11F-A

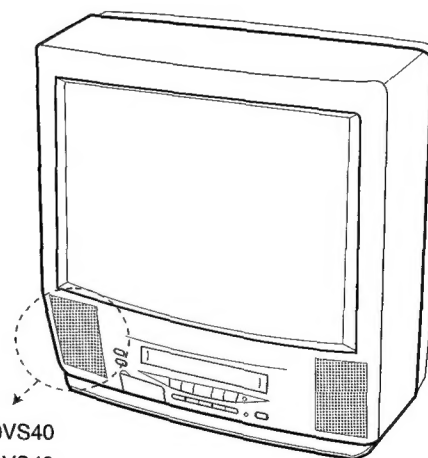
REVISED



RM-Y153
RM-Y153W



KV-13VM40/13VM41
KV-13VM42/13VM43



KV-20VS40
KV-20VS42

KV-20VS40/20VM40
KV-20VS42/20VM42



TRINITRON® COLOR VIDEO TV
SONY®

COMPARISON FUNCTION OF EACH MODEL.

Symbol	Model	Commander	Dest	Chassis No	V-chip	Stereo	Color
A	KV-13VM40	RM-Y153	US	S10B-A	No	No	Black
			Canadian	S11B-A	No	No	Black
B	KV-13VM41	RM-Y153W	US	S10C-A	No	No	White
C	KV-20VM40	RM-Y153	US	S10D-A	No	No	Black
			Canadian	S11A-A	No	No	Black
D	KV-20VS40	RM-Y153	US	S10A-A	No	Yes	Black
			Canadian	S11C-A	No	Yes	Black
A'	KV-13VM42	RM-Y153	US	S10F-A	Yes	No	Black
			Canadian	S11E-A	Yes	No	Black
B'	KV-13VM43	RM-Y153W	US	S10G-A	Yes	No	White
C'	KV-20VM42	RM-Y153	US	S10E-A	Yes	No	Black
			Canadian	S11D-A	Yes	No	Black
D'	KV-20VS42	RM-Y153	US	S10H-A	Yes	Yes	Black
			Canadian	S11F-A	Yes	Yes	Black

- ※ Difference of series '40', '41' vs. series '42', '43' are only soft ware for 'V-Chip' function, the other are same.

Note : Delete function from '42', '43' series.

Different parts of inside cabinet are only micro-processor and OSD chip on 'MA' board.

- Micro processor : IC701 (M37777MAA - AA3)
- OSD chip : IC702 (M35041 - 107FP)

- ※ This service manual has following operating manual.

Pages on Service Manual	Contents	Apply Model	Manual Quotation
Page 2	Specifications	Same as All Models	VM40/41Series
Page 5 ~ Page 21	General Function Operation	Same as All Models	VM40/41Series
Page 22 ~ Page 27	Parental Control Operation	Only VM42/43series	VM42/43Series
Page 28 ~ Page 32	General Function Operation	Same as All Models	VM40/41Series

Specifications

TV Section

Television system	American TV Standard
Channel coverage	VHF: 2-13/UHF:14-69/ CATV: 1-125
Picture tube	KV-13VM40/41: Microblack™ Trinitron® tube KV-20VM40: Trinitron® Tube 20-inch picture measured diagonally KV-20VS40: Trinitron® Tube 20-inch picture measured diagonally
Screen size	KV-13VM40/41: 13-inch picture measured diagonally KV-20VM40/KV-20VS40: 20-inch picture measured diagonally
Antenna	75-ohm external antenna terminal for VHF/UHF

Video Section

Format	VHS NTSC standard
VCR system	KV-13VM40/KV-13VM41/KV- 20VM40: Rotary 4-head helical scanning monaural system KV-20VS40: Rotary 4-head helical scanning Hi-Fi stereo system
Audio recording system	KV-13VM40/KV-13VM41/ KV-20VM40: Monaural KV-20VS40: HiFi Stereo
Video signal	NTSC color, EIA standards
Tape speed	SP: 33.35 mm/s (1 ³ / ₈ inches/s) EP: 11.11 mm/s (7/16 inches/s) LP: 16.67 mm/s (11/16 inches/s), playback only
Maximum recording time	8 hours in EP mode (with T-160 tape)
Inputs	KV-13VM40/KV-13VM41/KV- 20VM40 VIDEO IN: phono jack (2) Input level: 1 Vp-p, 75 ohms, unbalanced, sync negative KV-20VS40 VIDEO IN: phono jack (2) Input level: 1 Vp-p, 75 ohms, unbalanced, sync negative

KV-13VM40/KV-13VM41/ KV-20VM40	AUDIO IN: phono jack (2) Input level: 500 mVrms Input impedance: 47 kilohms
KV-20VS40	AUDIO IN: phono jack (4) Input level: 500 mVrms Input impedance: 47 kilohms
KV-20VS40: Stereo minijack KV-13VM40/KV-13VM41/ KV-20VM40: Mono minijack	

General

Clock	Quartz locked
Clock back up	Approx. 30 minutes min.
Power requirements	120 V AC, 60 Hz
Power consumption	TV power ON KV-13VM40/KV-13VM41: 69 W KV-20VM40: 88 W KV-20VS40: 89 W Standby KV-13VM40/KV-13VM41/KV- 20VM40/KV-20VS40: 2.9 W
Operating temperature	5°C to 40°C (41°F to 104°F)
Storage temperature	-20°C to 60°C (-4°F to 140°F)
Dimensions	KV-13VM40/KV-13VM41: Approx. 375 × 399 × 408 mm (w/h/d) (14 ³ / ₄ × 15 ³ / ₄ × 16 ¹ / ₅ inches) KV-20VM40/KV-20VS40: Approx. 506 × 514 × 476 mm (w/h/d) (19 ⁹ / ₁₀ × 20 ¹ / ₄ × 18 ³ / ₄ inches)
Mass	KV-13VM40/KV-13VM41: Approx. 14.5 kg (31 lbs. 16 oz) KV-20VM40/KV-20VS40: Approx. 26 kg (57 lbs. 5 oz)

Accessories supplied

Remote control (1)
R6 (size AA) batteries (2)

Design and specifications are subject to change
without notice.

SAFETY CHECK-OUT (US model only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, through functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the condition of the monopole antenna (if any). Make sure the end is not broken off, and has the plastic cap on it. Point out the danger of impalement on a broken antenna to the customer, and recommend the antenna's replacement.
8. Check the B+ and HV to see they are at the values specified. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
9. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5mA (500 microamperes) Leakage current can be measured by any one of three methods

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of; VOM or battery-operated AC voltmeter. The "limit" indication is 0.75V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a cold water pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60-100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line, the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)

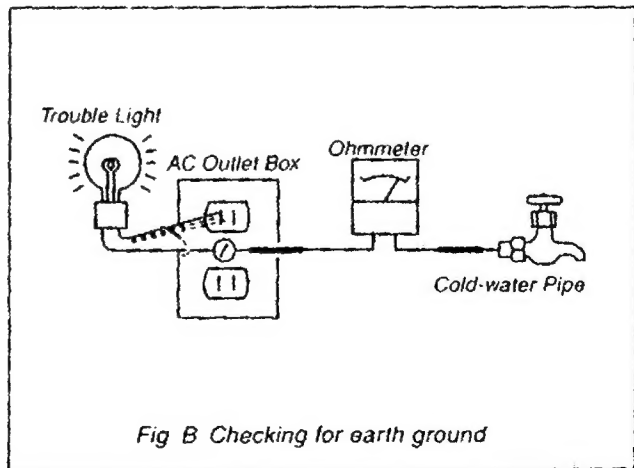
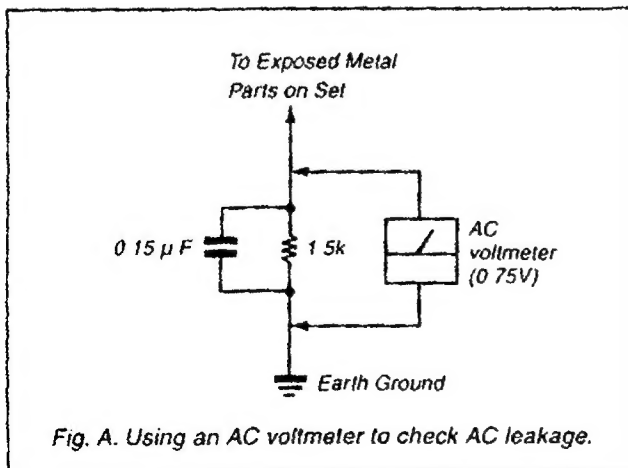


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CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK \triangle ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

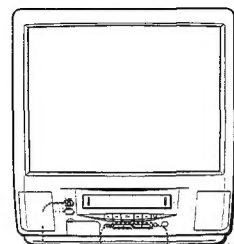
ATTENTION

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

ATTENTION AUX COMPOSANTS RELATIFS Á LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE MAPQUE \triangle SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLODÉES ET LES LISTES DE PIÉCES CONT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES RÉGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT SONT IDENTIFIÉS DANS LE PRÉSENT MANUEL. SUIVRE CES PROCÉDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT EST SUSPECTÉ.

Step 3 — Setting Up the Video/TV Automatically – AUTO SET UP



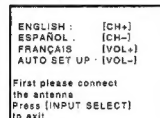
POWER VOL +/- CHANNEL +/-

You can set up your Video/TV easily by using the AUTO SET UP feature. To set up each item individually, see “Changing the menu language” (page 11), “Setting cable TV on or off” (page 9), and “Presetting channels — AUTO PROGRAM” (page 10).

Before you begin

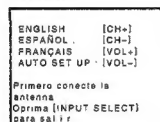
- Connect the antenna or cable to the Video/TV

- 1 Press POWER to turn the Video/TV on.



- 2 Select the on-screen menu language.

If you prefer Spanish or French to English, you can change the on-screen menu language by pressing CHANNEL – for Spanish or VOL + for French.



All of the on-screen menus are set to the factory preset condition in the selected language.

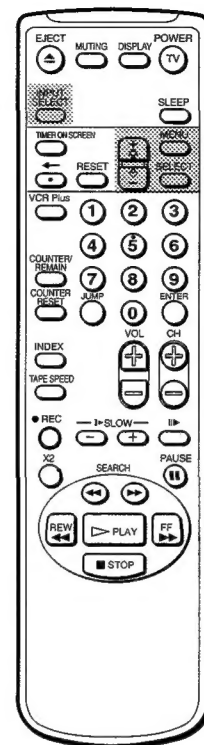
- 3 Press VOL – to start AUTO SET UP



“AUTO PROGRAM” appears on the screen and the Video/TV starts scanning and presetting channels automatically. When all receivable channels are stored, “AUTO PROGRAM” disappears and the lowest numbered channel is displayed.

To exit AUTO SET UP

Press INPUT SELECT.



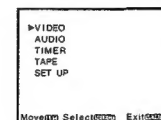
Note

If CHANNEL SKIP/ADD appears in black, the Video/TV is set to receive a video input signal through the input jacks and you cannot select CHANNEL SKIP/ADD. Press INPUT SELECT so that a channel number appears on the screen.

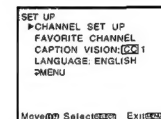
Erasing and adding channels

After AUTO SET UP, you can erase unnecessary channels or add more channels.

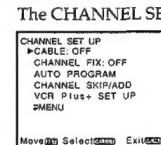
- 1 Press MENU to display the main menu. The main menu appears.



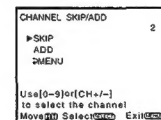
- 2 Move the cursor (▶) to “SET UP” with + ◀ or – ▶ and press SELECT. The SET UP menu appears.



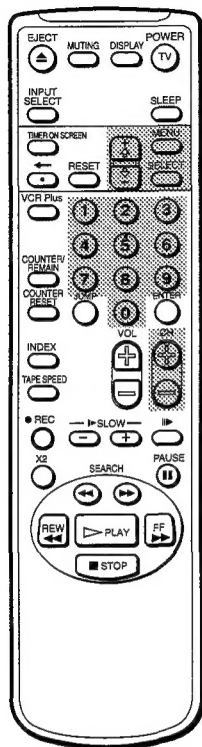
- 3 Move the cursor (▶) to “CHANNEL SET UP” with + ◀ or – ▶ and press SELECT. The CHANNEL SET UP menu appears.



- 4 Move the cursor (▶) to “CHANNEL SKIP/ADD” with + ◀ or – ▶ and press SELECT. The CHANNEL SKIP/ADD menu appears.



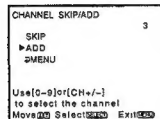
To reset the factory settings
Press POWER on the Video/TV while pressing RESET on the remote control.



5 Erase and/or add channels:

To erase an unwanted channel

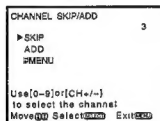
- (1) Make sure the cursor (▶) is beside SKIP.
- (2) Press CH +/– or the 0 - 9 buttons to select the channel you want to erase and press SELECT.



The message "Channel will be skipped" appears for several seconds and the cursor (▶) moves to ADD.

To add a channel

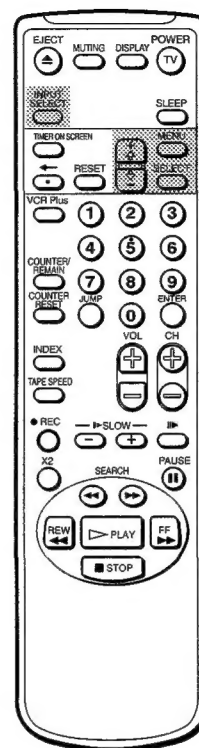
- (1) Make sure the cursor (▶) is beside ADD.
- (2) Press CH +/– or the 0 - 9 buttons to select the channel you want to add and press SELECT.



The message "Channel will be added" appears and the cursor (▶) moves to SKIP.

6 To erase and/or add other channels, repeat step 5.

7 Press MENU to return to the original screen.



Note

If CABLE appears in black, the Video/TV is set to receive video input signal through the input jacks and you cannot select CABLE. Press INPUT SELECT so that a channel number appears on the screen.

Setting cable TV on or off

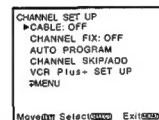
If you have connected the Video/TV to a cable TV system, set CABLE to ON (the Setting factory setting). If not, set CABLE to OFF to watch VHF or UHF channels.

1 Press MENU to display the main menu.

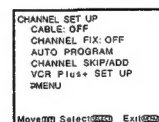
2 Move the cursor (▶) to "SET UP" with + ◀ or ▶ and press SELECT. The SET UP menu appears.



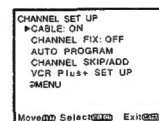
3 Move the cursor (▶) to "CHANNEL SET UP" with + ◀ or ▶ and press SELECT. The CHANNEL SET UP menu appears.



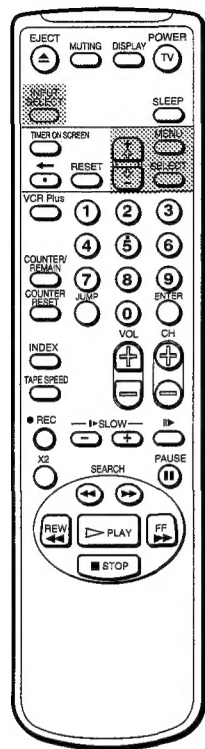
4 Move the cursor (▶) to "CABLE" with + ◀ or ▶ and press SELECT. The selected position turns red.



5 Using + ◀ or ▶, select "ON" or "OFF" and press SELECT.



6 Press MENU to return to the original screen.



Receivable channels for this Video/TV

VHF: 2 – 13
UHF: 14 – 69
Cable: 1 – 125

Note

If AUTO PROGRAM appears in black, the Video/TV is set to receive a video input signal through the input jacks and you cannot select AUTO PROGRAM. Press INPUT SELECT so that a channel number appears on the screen.

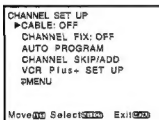
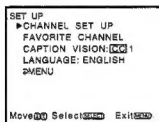
To erase unnecessary channels, or to add channels

See “Erasing and adding channels” (page 7).

Presetting channels – AUTO PROGRAM

You can preset TV channels easily by using the AUTO PROGRAM feature. Preset channels during the day rather than late at night, when some channels may not be broadcasting.

- 1 Press MENU to display the main menu.
- 2 Move the cursor (▶) to “SET UP” with + ◀ or ▶ and press SELECT. The SET UP menu appears.
- 3 Move the cursor (▶) to “CHANNEL SET UP” with + ◀ or ▶ and press SELECT. The CHANNEL SET UP menu appears.
- 4 Move the cursor (▶) to “AUTO PROGRAM” with + ◀ or ▶ and press SELECT.

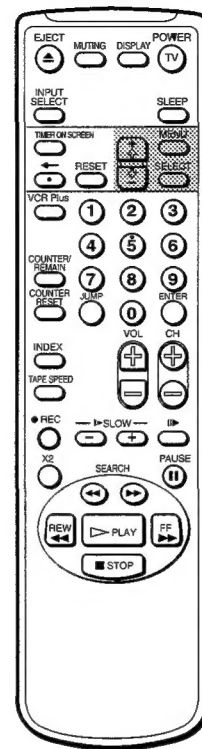


“AUTO PROGRAM” appears on the screen and the Video/TV starts scanning and presetting channels automatically. When all receivable channels are stored, “AUTO PROGRAM” disappears and the lowest numbered channel is displayed.

- 5 Press MENU to return to the original screen.

To exit AUTO PROGRAM

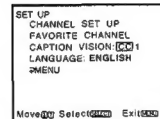
Press any button.



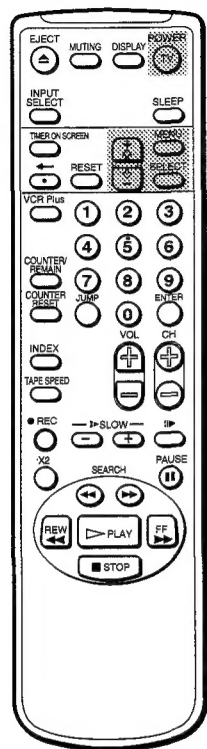
Changing the menu language

If you prefer Spanish or French to English, change the menu language with the following steps.

- 1 Press MENU to display the main menu.
- 2 Move the cursor (▶) to “SET UP” with + ◀ or ▶ and press SELECT. The SET UP menu appears.
- 3 Move the cursor (▶) to “LANGUAGE” with + ◀ or ▶ and press SELECT. The language position turns red.
- 4 Using + ◀ or ▶, select the language you want and press SELECT. The entire menu appears in the selected language.
- 5 Press MENU to return to the original screen.



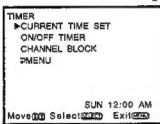

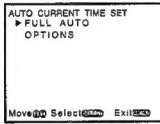
Step 4 — Setting the Clock

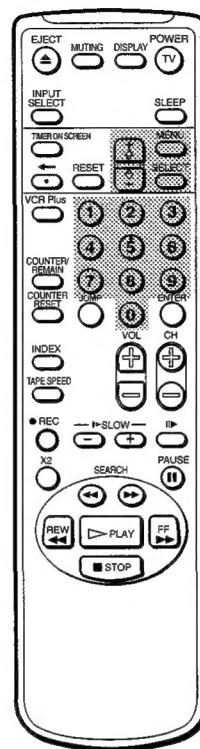


Note
If there are only a few channels in your area that carry time signals, setting the clock automatically may take up to about 45 minutes. If nothing happens even after you wait for about 45 minutes, set the clock manually.

Setting the clock automatically

Some TV and cable channels transmit time signals with their broadcasts. Your Video/TV can pick up these time signals to automatically set the clock (AUTO CLOCK). The AUTO CLOCK feature works only if a channel in your area is broadcasting a time signal. If your Video/TV cannot pick up the signals, set the clock manually (page 15).

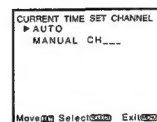
- 1 Press MENU to display the main menu.
- 2 Move the cursor (►) to "TIMER" with + or - and press SELECT. The TIMER menu appears.

- 3 Move the cursor (►) to "CURRENT TIME SET" with + or - and press SELECT. The CURRENT TIME SET menu appears.

- 4 Move the cursor (►) to "AUTO" with + or - and press SELECT. The AUTO CURRENT TIME SET menu appears.

- 5 Move the cursor (►) to "FULL AUTO" with + or - and press SELECT. The message "Please turn TV off to receive clock data" appears for 5 seconds.
- 6 To activate the Auto Clock setting, press POWER to turn the Video/TV off. The time signals automatically set the time for your time zone and adjust for daylight saving time.






If the clock does not activate

If the clock is set, but your time zone or daylight saving time is not set correctly, you can adjust these settings manually. If you live close to a time zone border, the Video/TV's clock may not match the actual broadcast times of the programs. To confirm the time zone of the broadcast service, contact your cable company and set the clock accordingly.

- 1 Follow steps 1-5 in "Setting the clock automatically" and select "OPTIONS" in step 5. The CURRENT TIME SET CHANNEL menu appears.



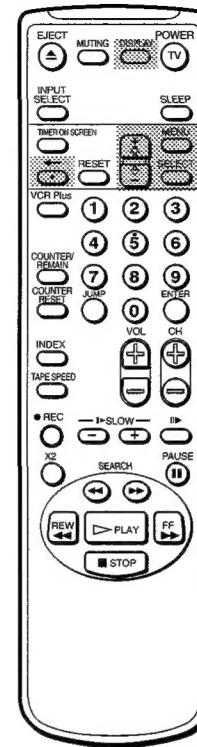
If you know a channel number that carries a time signal

- (1) Move the cursor (►) to "MANUAL" with + or - and press SELECT. The CH position turns red.
(2) Using the 0-9 buttons, enter the channel number and press SELECT. Then skip steps 2-5.
- 2 Move the cursor (►) to "AUTO" with + or - and press SELECT. The AUTO CURRENT TIME SET menu appears.

- 3 Move the cursor (►) to "TIME ZONE" with + or - and press SELECT. The TIME ZONE menu appears.

- 4 Using + or -, select "AUTO". Then move the cursor (►) to "OK," and press SELECT. The DAYLIGHT SAVING TIME menu appears.


- 5 Using + or - , select "AUTO," "STANDARD TIME," or "DAYLIGHT SAVING TIME." (See the table below). Then move the cursor (►) to "OK," and press SELECT.

Choose	To
AUTO	Select to set the daylight saving time automatically.
STANDARD TIME	Select if your area does not use daylight saving time.
DAYLIGHT SAVING TIME	Select if your area uses daylight saving time.

- 6 To activate the Auto Clock setting, press POWER to turn the Video/TV off.



To display the time
Press DISPLAY.

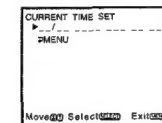
If you have made a mistake
Press ◀ to return to the previous position.

If the clock has stopped and "--/--" is displayed
You have to re-set the clock.

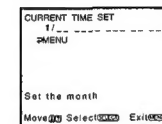
Setting the date and clock manually

Setting the date and clock enables you to use the timer feature for recording or automatically tuning the Video/TV on or off.

- 1 Press MENU to display the main menu.
- 2 Move the cursor (►) to "TIMER" with + or - and press SELECT. The TIMER menu appears.
- 3 Move the cursor (►) to "CURRENT TIME SET" with + or - and press SELECT. The CURRENT TIME SET menu appears.
- 4 Move the cursor (►) to "MANUAL" with + or - and press SELECT. The CURRENT TIME SET menu appears.



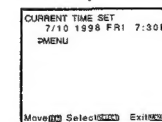
- 5 Press SELECT to start setting the clock. The month section turns red.



- 6 Using + or - , set the month and press SELECT. The day section turns red.



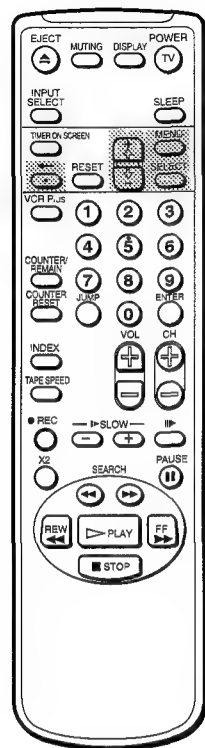
- 7 Using + or - and SELECT, set the day, year, hour and minute in the same way as in step 6.



- 8 After setting the minutes, press SELECT. The clock starts working.

- 9 Press MENU to return to the original screen.

Step 5 — Setting Up VCR Plus+



The VCR Plus+ feature allows you to simplify the task of programming your Video/TV to make recordings with the timer. Setting up your Video/TV involves coordinating the TV channel number (the number you turn on your Video/TV or VCR to watch a program) with the guide channel (the number that's assigned to that channel in your program guide). To find the guide channel numbers, look in the "Channel Line-up Chart" in the program guide for your area that features VCR PlusCodes. It usually looks like the example on the next page.

Setting the guide channel

- 1 Press MENU to display the main menu.
- 2 Move the cursor (▶) to "SET UP" with + ◀ or ▶ - and press SELECT. The SET UP menu appears.

```
SET UP
▶ CHANNEL SET UP
FAVORITE CHANNEL
CAPTION VISION: [ON]
LANGUAGE: ENGLISH
▶ MENU
Move [Left] Select [Enter] Exit [Right]
```

- 3 Move the cursor (▶) to "CHANNEL SET UP" with + ◀ or ▶ - and press SELECT. The CHANNEL SET UP menu appears.

```
CHANNEL SET UP
▶ CABLE: OFF
CHANNEL FIX: OFF
AUTO PROGRAM
CHANNEL SKIP/ADD
VCR Plus+ SET UP
▶ MENU
Move [Left] Select [Enter] Exit [Right]
```

- 4 Move the cursor (▶) to "VCR Plus+ SET UP" with + ◀ or ▶ - and press SELECT. The VCR Plus+ SET UP menu appears.

```
VCR Plus+ SET UP
▶ GUIDE CH - TV CH
---
CHANNEL LIST
▶ MENU
Move [Left] Select [Enter] Exit [Right]
```

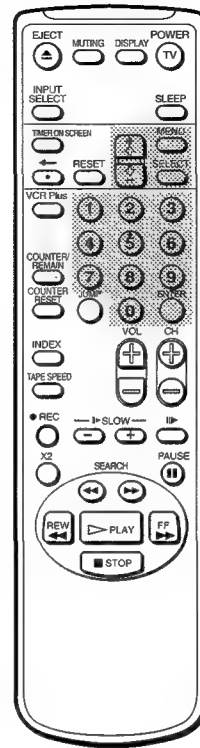
- 5 Press SELECT to enter the guide channel number. The GUIDE CH position turns red.

```
VCR Plus+ SET UP
GUIDE CH - TV CH
---
CHANNEL LIST
▶ MENU
Use [0-9] to set a
guide channel.
Then press [ENTER]
```

Note

If VCR Plus+ SET UP appears in black, the Video/TV is set to receive a video input signal through the input jacks and you cannot select VCR Plus+ SET UP. Press INPUT SELECT so that a channel number appears on the screen.

If you have made a mistake
Press ◀ to return to the previous position.



- 6 Press the 0-9 buttons to enter the channel number assigned in the guide channel and press ENTER. The TV CH position turns red.

```
VCR Plus+ SET UP
GUIDE CH - TV CH
16 - ---
CHANNEL LIST
▶ MENU
Use [0-9] to set a
TV channel.
Then press [ENTER]
```

- 7 Press the 0-9 buttons to enter the actual channel number on your Video/TV and press ENTER.

```
VCR Plus+ SET UP
▶ GUIDE CH - TV CH
16 - 125
CHANNEL LIST
▶ MENU
Move [Left] Select [Enter] Exit [Right]
```

- 8 Repeat steps 6 and 7 for each guide channel number you want to enter.
- 9 Move the cursor (▶) to "CHANNEL LIST" with + ◀ or ▶ - and press SELECT to confirm your channel settings.

```
CHANNEL LIST
GUIDE- TV GUIDE- TV
16 - 125 33 - 48
17 - 22 59 - 3
20 - 42 81 - 47
21 - 28 99 - 102
▶ PAGE 1
▶ MENU
Move [Left] Select [Enter] Exit [Right]
```

- 10 After you finish presetting, press MENU to return to the original screen.

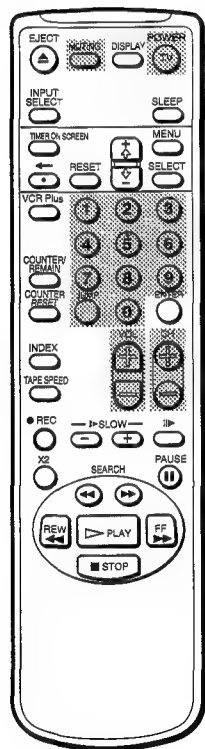
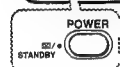
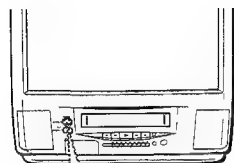
Example of a "Channel Line-up Chart"

CABLE CH		VCR Plus+ GUIDE CH
16	MMC American Movie Classics	35
17	BRV Bravo (program gr'd only)	54
20	CNN Cable News Network	42
21	CSP C-SPAN	28
22	DIS The Disney Channel	53
25	DISC The Discovery Channel	43
34	ESPN ESPN	34
35	FAM The Family Channel	47
5	HBO Home Box Office	33
27	LIF Lifetime	46
29	MAX Comedy	45
30	MTV Music Television	48
31	NIK Nick	38
38	SC Sports Channel	59
39	SCA Sports Channel: America	70
45	SHO Showtime	41
17	TBS TBS SuperStation	43
44	TMC The Movie Channel	58
49	TNN The Nashville Network	49
50	TNT Turner Network Television	52
51	USA USA Network	44

Notes

- If you enter more than eight channels, the additional channels are stored on separate "pages." Move the cursor (▶) to "PAGE" and use + ◀ or ▶ - buttons to view the entire list.
- The maximum number of guide channels is 99.

Watching the TV



This section explains the basic functions to use while watching the TV. Most of the operations can be done using the remote control.

Switching the Video/TV on and off

Switching on

Press **POWER**.
The **STANDBY** lamp flashes until the picture appears.

Switching off

Press **POWER**.
The Video/TV enters standby mode and the **STANDBY** lamp on the front of the Video/TV lights up in red if a tape is inserted in the Video/TV. If a tape is not inserted in the Video/TV, the **STANDBY** lamp disappears.

Selecting TV programs

Turn the cable mode **ON** or **OFF** to select the type of channel you want to watch. For more information on setting the cable mode, see "Setting cable TV on or off" on page 9.
Press **CH +/-** or the 0-9 buttons on the remote control, or **CHANNEL +/-** on the Video/TV.

To select a double-digit numbers using the 0-9 buttons

For example, if you want to select 21, first press 2, then press 1.

Adjusting the volume

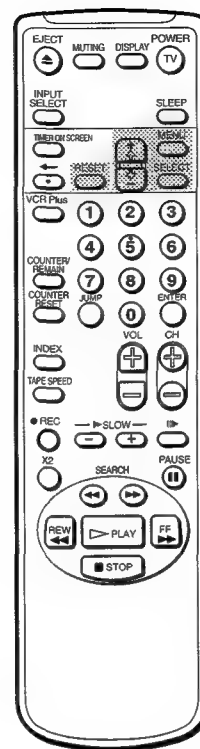
Press **VOL +/-**.

Muting the sound

Press **MUTING**.
"MUTING" appears on the screen.
To resume normal sound, press **MUTING** again, or press **VOL +**.

Switching quickly between two channels

Press **JUMP**. The channel switches to the previously selected channel.
Pressing **JUMP** again switches the channel back to the originally selected channel.



Adjusting the picture

When watching TV programs, you can adjust the picture to suit your taste. You can adjust the picture received through the input jacks as well. These adjustments are retained in memory even when you turn off the TV.

- 1 Press **MENU** to display the main menu.
The main menu appears.



- 2 Move the cursor (▶) to "VIDEO" with + ◀ or ▶ ◊ and press **SELECT**.
The VIDEO menu appears.



- 3 Using + ◊ or ▶ ◊, select the item you want to adjust and press **SELECT**.



- 4 Adjust the picture with + ◊ or ▶ ◊ and press **SELECT**.
With each press, the vertical bars increase or decrease and the figure at the right margin changes to show the control level. (See the table below.)
- 5 To adjust other items, repeat steps 3 and 4 above.
- 6 Press **MENU** to return to the original screen.
The adjusted control levels are stored.

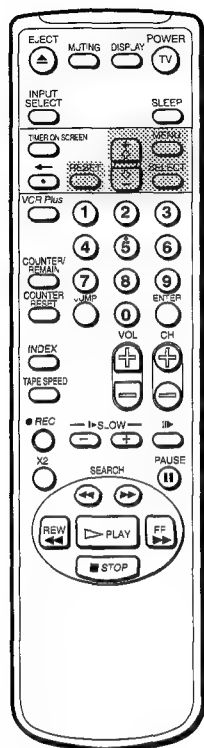
Description of adjustable items

Item	Press + ◊ to	Press - ◊ to
PICTURE	Increase picture contrast.	Decrease picture contrast.
BRIGHTNESS	Brighten the picture.	Darken the picture.
COLOR	Increase color intensity.	Decrease color intensity.
HUE	Make picture tones greenish.	Make picture tones purplish.
SHARPNESS	Sharpen the picture.	Soften the picture.

To restore the factory settings

Press **RESET** after selecting and displaying the VIDEO menu.
All of the settings are restored to the factory settings.

Note
You can not jump to channels you scanned through using the **CH +/-** buttons.



Adjusting the sound (KV-20VS40 only)

You can adjust the bass, treble, and balance to suit your taste. You can adjust the sound of the signal received through the input jacks as well.

- 1 Press MENU to display the main menu.
- 2 Move the cursor (▶) to "AUDIO" with + ◀ or ▶ and press SELECT. The AUDIO menu appears.



- 3 Select the item you want to adjust.
For example:
To adjust bass, move the cursor (▶) with + ◀ or ▶ to "BASS" and press SELECT.



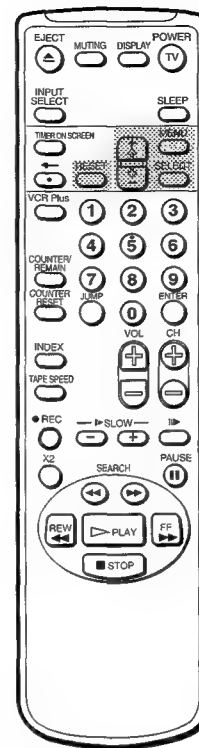
- 4 Adjust the selected item:
Press + ◀ or ▶ to adjust the item and press SELECT.
- 5 To adjust other items, repeat steps 3 and 4 above.
- 6 Press MENU to return to the original screen.

Description of adjustable items

Item	Press + ◀ to	Press - ▶ to
BASS	Increase the low pitched sounds.	Decrease the low pitched sounds.
TREBLE	Increase the high pitched sounds.	Decrease the high pitched sounds.
BALANCE	Emphasize the right speaker's volume.	Emphasize the left speaker's volume.

To restore the factory settings

Press RESET after selecting and displaying the AUDIO menu.
All of the settings are restored to the factory settings.



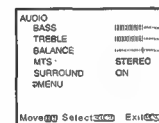
Selecting stereo or bilingual programs (KV-20VS40 only)

The Multichannel TV Sound (MTS) feature allows you to switch between stereo, mono, and Second Audio Program (SAP).

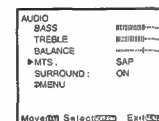
- 1 Press MENU to display the main menu.
- 2 Move the cursor (▶) to "AUDIO" with + ◀ or ▶ and press SELECT. The AUDIO menu appears.



- 3 Move the cursor (▶) to "MTS" with + ◀ or ▶ and press SELECT. The selected position turns red.



- 4 Using + ◀ or ▶, select "STEREO," "SAP," or "MONO" and press SELECT.



Choose	To
STEREO	Select for stereo reception when viewing a program broadcast in stereo.
SAP	Select to listen to a bilingual broadcast.
MONO	Select for mono reception (use to reduce noise during stereo broadcasts).

To restore the factory settings

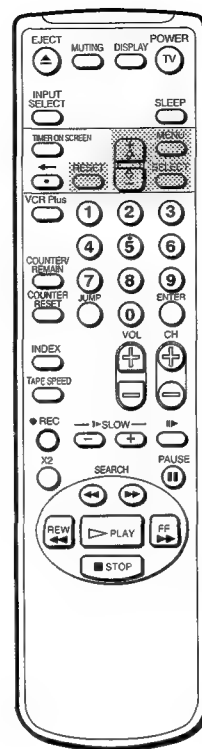
Press RESET after selecting and displaying the AUDIO menu.
All of the settings are restored to the factory settings.

Note

If you set MTS to "SAP" and a SAP signal is not being broadcast, no sound will come from the speakers. (However, the program's primary audio channel will be recorded.) See page 22 for a table describing the relation between the speakers and the source signal.

Thus table describes the relation between the sound output from the speaker, the recorded sound, and the MTS mode. For instance, if you set MTS to "SAP" and a SAP signal is not being broadcast, the sound from the speakers is muted. However, if you record the same program, the sound will be recorded in the program's primary audio channel (stereo or mono).

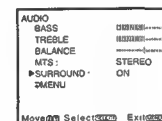
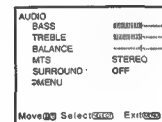
Source Signal	MTS Mode	Speaker Output		Recorded Sound			On-screen Display
		L	R	Hi-Fi "L" Track	Hi-Fi "R" Track	Normal Track	
Mono	Mono	L + R	L + R	L + R	L + R	L + R	None
	Stereo	L + R	L + R	L + R	L + R	L + R	None
Stereo	Mono	L + R	L + R	L + R	L + R	L + R	None
	Stereo	L + R	L + R	L + R	L + R	L + R	STEREO
Mono + SAP	Mono	L + R	L + R	L + R	L + R	L + R	None
	Stereo	L + R	L + R	L + R	L + R	L + R	None
Stereo + SAP	Mono	L + R	L + R	L + R	L + R	L + R	None
	Stereo	L + R	L + R	L + R	L + R	L + R	STEREO



Listening to surround sound effects (KV-20VS40 only)

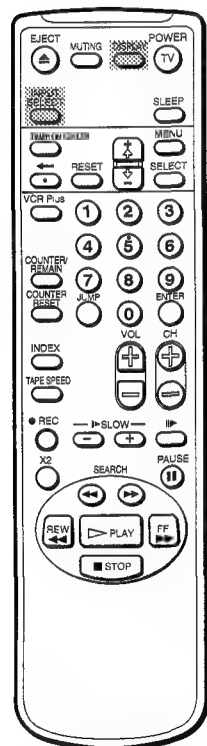
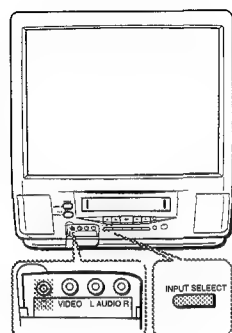
The surround feature simulates the sound reproduction of a movie theater or a concert hall. Surround is only effective for stereo programs.

- 1 Press MENU to display the main menu.
- 2 Move the cursor (▶) to "AUDIO" with + ◀ or ▶ ▹ and press SELECT. The AUDIO menu appears.
- 3 Move the cursor (▶) to "SURROUND" with + ◀ or ▶ ▹ and press SELECT. The selected position turns red.
- 4 Using + ◀ or ▶ ▹, select "ON" or "OFF" and press SELECT.



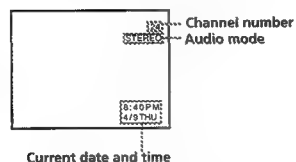
To restore the factory settings

Press RESET after selecting and displaying the AUDIO menu. All of the settings are restored to the factory settings.



Displaying on-screen information

Press DISPLAY to turn the display on or off.
The channel number, date and time, audio mode are displayed.
Press DISPLAY repeatedly to scroll between XDS ON, CAPTION, and DISPLAY OFF. For more information on XDS and CAPTION, see page 39.



To make the indications disappear, press DISPLAY repeatedly until "DISPLAY OFF" appears.

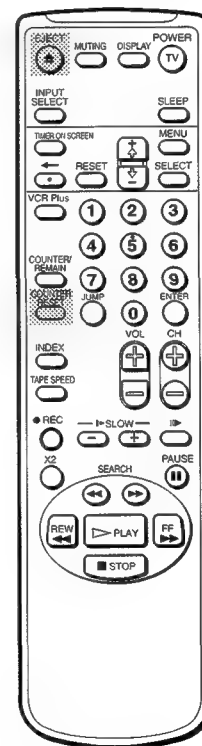
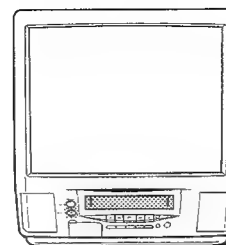
Watching a video input signal through the line input jacks

Press INPUT SELECT repeatedly until the desired input indicator appears.
To return to the normal TV picture, press INPUT SELECT until the channel number appears. For more information on using the line input jacks, see page 47

Listening with headphones

Plug the headphones (not supplied) into the (headphones) jack which is located inside the cover on the front of the Video/TV.
The sound from the speaker is turned off.

Playing a Tape



This section shows you how to insert a video cassette and to play it. For more information on using the advanced features, see "Additional Operations" on pages 36 through 47

Inserting a video cassette

Gently insert a cassette with the arrow indication facing upwards. The cassette is automatically loaded into the cassette compartment and the Video/TV turns on. If you insert a cassette without a safety tab, playback automatically starts.

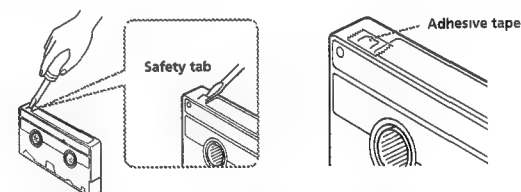
Ejecting a video cassette

Press EJECT .
You can eject the cassette even if the power is in standby mode.

Protecting your cassette against accidental erasure

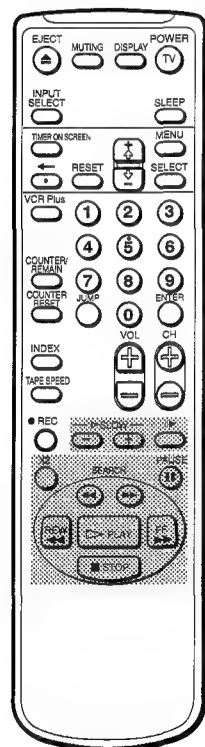
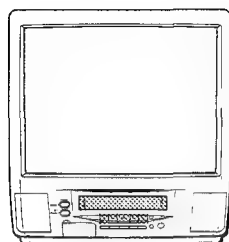
The cassette has a safety tab to protect against accidentally erasing a previous recording. Break off the safety tab with a screw driver or a similar tool to prevent recording.
If the safety tab is removed, the cassette is ejected when you try to record on it.

To record on a cassette with the safety tab broken off, simply cover the tab hole with adhesive tape.



Resetting the tape counter

The tape counter helps you to locate a certain scene after playback. Press COUNTER RESET on the remote control to set the counter to "00:00:00" before playing the tape. The tape counter is automatically reset to "00:00:00" whenever a cassette is inserted. The Video/TV keeps counting the length of the tape being played. Note, however, that the tape counter does not count the portions without video signals recorded.



Notes

- The sound is muted during all operations except for normal playback.
- If the OFF timer is activated during playback, playback stops.

Playing a tape

- 1 Insert the tape.
The Video/TV automatically turns on. If you insert a cassette without a safety tab, playback automatically begins.
- 2 Press PLAY ▷.
Playback begins. On screen-information automatically disappears after several seconds.

To stop playback

Press STOP ■.
The Video/TV returns to the normal TV picture.

To stop playback for a moment

Press PAUSE ||. The picture pauses.
Press PAUSE || again or press PLAY ▷ to resume playback.
If you leave your Video/TV in pause mode, normal playback resumes after about 5 minutes.

To fast forward the tape

Press STOP ■, then press FF ►►.

To rewind the tape

Press STOP ■, then press REW ◀◀.

To view a tape at high speed

During playback, press and hold REW ◀◀ (rewind) or FF ►► (fast forward). A high-speed picture appears on the TV screen.
To resume normal playback, release the button.

To view the picture while in fast forward or rewind mode

Press and hold FF ►► during fast forward or REW ◀◀ during rewind. The picture appears on the screen.
When you release the button, fast forward or rewind mode is resumed.

To view the picture at high speed

During playback, press SEARCH ►► or SEARCH ◀◀.

To view the picture at twice the normal speed

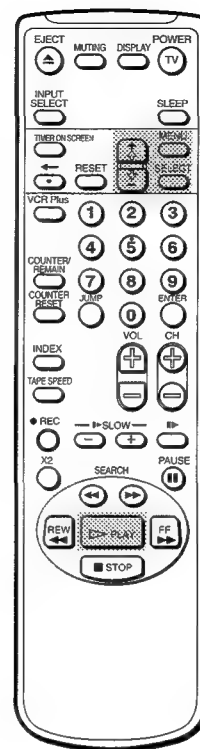
During playback, press X2.

To view the picture in slow motion

During playback, press SLOW ►▶ +/–.

To playback frame by frame

Press PAUSE || during normal playback, then press ||▶ (frame).



Note

If you eject the cassette tape or turn off the power, AUTO REPEAT will return to OFF.

Playing a tape repeatedly – AUTO REPEAT

You can play the recorded portion of a tape repeatedly.

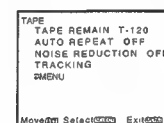
- 1 Press MENU.
The main menu appears.



- 2 Move the cursor (▶) to "TAPE" with + ◀ or – ▶ and press SELECT.
The TAPE menu appears.



- 3 Move the cursor (▶) to "AUTO REPEAT" with + ◀ or – ▶ and press SELECT.
The selected position turns red.

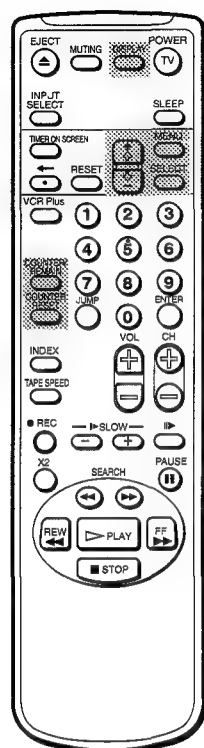


- 4 Using + ◀ or – ▶, select "ON" and press SELECT.



- 5 Press MENU to return to the original screen.

- 6 Press PLAY ▷.
Playback begins. When the tape reaches the end, it will automatically rewind and begin playing again.

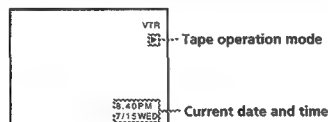


Notes

- The tape operation mode is displayed on the screen whenever you change the mode.
- If you are rewinding a tape and the time counter is displayed on the screen, the tape will stop when the counter reaches "00:00:00." Use this function to search for the beginning of a recording.

Displaying on-screen information

Press DISPLAY to turn the display on or off.
The date and time, tape operation mode is displayed.
Press DISPLAY repeatedly to scroll between XDS ON, CAPTION, and DISPLAY OFF. For more information on XDS and CAPTION, see page 39.



Displaying the tape counter

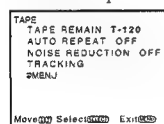
Press COUNTER/REMAIN to display the tape counter. The tape counter shows the tape travel time in hours, minutes and seconds during recording or playback. Each time you press COUNTER/REMAIN, the time counter and the remaining tape time counter appears alternately. Press COUNTER RESET to restore the counter to "00:00:00."



When you use a 2-hour (120 minute) tape, set TAPE REMAIN to T-120.
When you use a tape longer than 120 minutes, set TAPE REMAIN to OTHERS.

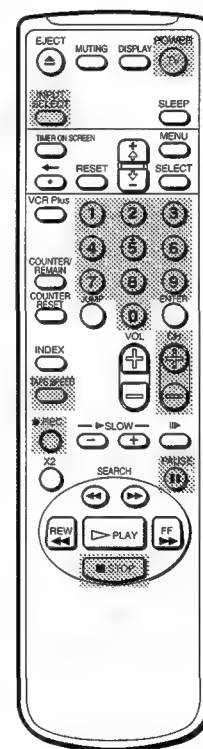
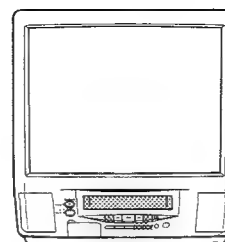
- 1 Press MENU to display the main menu.
- 2 Move the cursor (▶) to "TAPE" with + ◀ or - ▶ and press SELECT.
- 3 Move the cursor (▶) to "TAPE REMAIN" with + ◀ or - ▶ and press SELECT.

The selected position turns red.



- 4 Using + ◀ or - ▶, select "T-120" (the factory setting) or "OTHERS" and press SELECT.
- 5 Press MENU to return to the original screen.

Recording TV Programs



Note

If the ON or OFF timer is activated during recording, the TV screen turns on or off, but the recording continues.

Recording TV programs

Caution

Television programs, films, video tapes and other materials may be copyrighted. Unauthorized recording of such material may be contrary to the provisions of the copyright laws. Also, use of this recorder with cable television transmission and/or program owner.

- 1 Insert a cassette with a safety tab.
The Video/TV turns on automatically.
- 2 Press INPUT SELECT until a channel number appears on the screen.
To record from a cable box, turn it on.
- 3 Press TAPE SPEED to select the recording speed, SP (Standard Play), or EP (Extended Play). Recording in EP mode will extend the length of your tape.
Maximum recording time
SP mode: 2 hours 40 minutes with T-160
EP mode: 8 hours with T-160
- 4 Select the channel with CH +/- You can also use the 0-9 buttons on the remote control. To enter double-digit numbers (such as 24), first press 2, then press 4.
- 5 Press REC ●.
The REC lamp on the front of the Video/TV lights up and recording begins.

To stop recording

Press STOP ■.
When the tape reaches the end, it stops and ejects the cassette.

To pause recording

Press PAUSE ||.
To resume recording, press PAUSE || again.

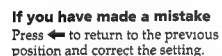
- You can cut out an unwanted scene during recording with this button.
- 1 Press PAUSE || when an unwanted scene appears on the screen.
Recording pauses.
 - 2 Press PAUSE || again to release the pause mode at the desired scene.
Recording resumes from the point set in step 2.

When the recording pause mode is left on for more than 5 minutes, the Video/TV stops recording.

Recording with the TV off

Press POWER.
The TV screen is turned off and the STANDBY lamp and REC lamp on the front of the Video/TV light up.
The Video/TV continues recording.

17



Press RESET while displaying the
TIMER SET/CHECK menu.

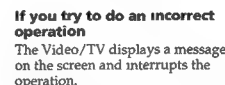
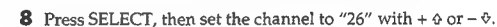
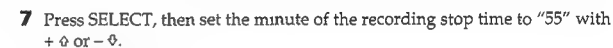
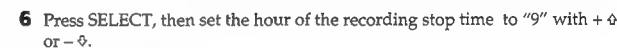
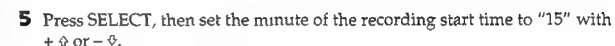
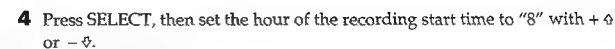
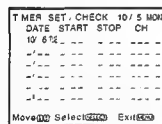
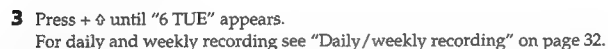
All of the items of the recording settings are erased.

if you set MTS to "SAP" in the AUDIO menu (KV-20VS40 only)
The SAP signal will be recorded only if a SAP signal is being broadcast. Otherwise, the program's primary audio channel will be recorded (stereo or mono.) See page 22 for a table describing the relation between the speakers and the source signal.

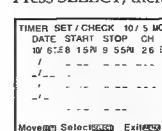
Before you begin

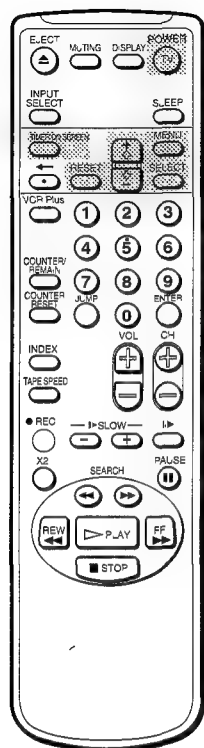
- ## Setting the timer

1 Press **TIMER ON SCREEN**.
The **TIMER SET/CHECK** menu appears.



- If the start time of the ON timer is the same or earlier than that of a timer recording program, the ON timer activates and the timer recording does not operate.
- If the start time of the ON timer is later than that of a timer recording program, the TV screen turns on at the ON timer start time, and the recording continues.





When preset timer recordings overlap

- If the turn-on time of two programs are the same, the program listed first in the menu has priority.
- If the recording start time of the second program comes before recording of the first program is over, the second program starts recording only after the first program has finished.

10 Press SELECT.

The message "Please turn TV off to set timer" is displayed for three seconds. Then the TIMER SET/CHECK menu reappears and the cursor (►) is displayed at the left margin.

11 When you want to set other programs, press - ◀ to move the cursor (►) to the next line, then repeat steps 2 through 10.

12 Press MENU to exit the TIMER SET/CHECK menu.

13 Press POWER to turn off the Video/TV

The TIMER REC lamp on the front of the Video/TV lights up and the Video/TV enters recording standby mode.

The Video/TV turns on automatically and starts recording at the preset start time, and the TIMER REC lamp on the front of the Video/TV lights up.

Daily/weekly recording

You can preset your Video/TV to record the same program every day of the week (daily recording) or the same program on the same day every week (weekly recording). Press - ◀ in step 3 until the desired setting appears in the "DATE" position. With each press, the setting changes as follows:

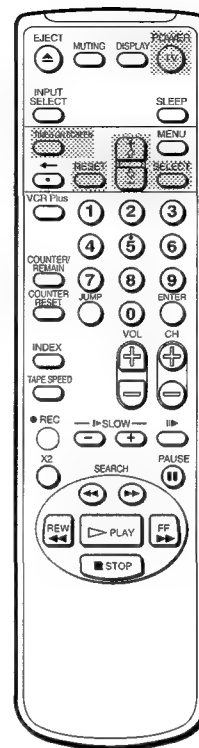
4 (today) → SUN-SAT → MON-FRI → EVERY SAT → EVERY FRI → EVERY THU → EVERY WED → EVERY TUE → EVERY MON → EVERY SUN → 3 (next month) → 2.....

To cancel timer recording

- 1 Press POWER to turn on the Video/TV
- 2 Press TIMER ON SCREEN.
- 3 Using + ▶ or - ◀, select the timer setting which you want to stop recording and press RESET.

Using the Video/TV before timer recording starts

To use the Video/TV before timer recording begins, just press POWER. The TIMER REC lamp turns off and the Video/TV switches on.



Checking the timer settings

You can display the list of the timer settings which you preset.

Press TIMER ON SCREEN.

The TIMER SET/CHECK menu appears.

TIMER SET / CHECK 10 / 5 MON				
DATE	START	STOP	CH	
▶ 10/ 6:18	15:27	9:55	26	F
10/ 7:07	30:21	6:30	50	F
MON-SAT	00:00	12:00	32	F
EVERY	9:55	12:30	21	F
-	-	-	-	-
-	-	-	-	-

Move[OK] Select[ENTER] Exit[ESC]

Press TIMER ON SCREEN again to erase the TIMER SET/CHECK menu.

Changing or cancelling the timer settings

1 Press TIMER ON SCREEN to display the TIMER SET/CHECK menu.

2 Select the setting you want to change or cancel with + ▶ or - ◀.

TIMER SET / CHECK 10 / 5 MON					
DATE	START	STOP	CH		
10/ 6:18	18:00	19:55	26	F	
10/ 7:07	30:00	8:30	50	F	
MON	SAT	00:00	12:00	32	F
EVERY	9:55	12:30	21	F	
-	-	-	-	-	
-	-	-	-	-	

MoveM Select(SHIFT) Exit(ENTER)

3 To change the setting

Using + ▶ or - ◀ and SELECT, re-enter the items you want to change. Refer to steps 2 through 10 of "Setting the timer" on pages 30 through 32.

To cancel the setting

Press RESET.

4 Press TIMER ON SCREEN to return to the original screen.

5 If there are other timer settings on the list, press POWER to set the Video/TV to timer recording standby mode.

Recording TV Programs Using VCR Plus+

Recording using QUICK TIMER

You can preset your Video/TV to start recording immediately and to automatically stop recording after a specific time period. Even if you have not set the clock, QUICK TIMER recording can be used.

To record

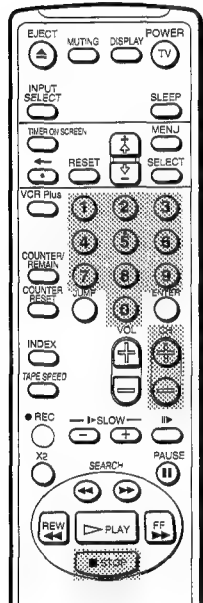
- 1 Insert a cassette with its safety tab intact.
- 2 Select the channel which you want to record with the 0-9 buttons or CH +/-
- 3 Press QUICK TIMER REC on the front of the Video/TV "QUICK TIMER 0:00" appears on the screen.
- 4 Press QUICK TIMER REC repeatedly to select the recording time period. With each press, the time period changes as follows:

0:00 → 0:30 → 1:00 → ... → 7:30 → 8:00

The time period turns yellow and recording starts. Even if you switch off the Video/TV, it continues recording. When the preset time period has elapsed, the Video/TV stops recording.

To stop QUICK TIMER recording

Press STOP ■ or QUICK TIMER REC repeatedly until "QUICK TIMER 0:00" appears on the screen.

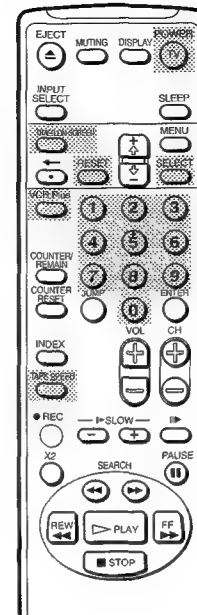


To change the recording time period after QUICK TIMER recording begins

Press QUICK TIMER REC until the desired time period appears.

Note

If the OFF timer is activated during quick timer recording, the TV screen turns off, but the quick timer recording continues.



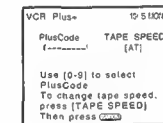
How VCR Plus+ works

Whenever you want to record a TV program, all you need to do is look up the program's "PlusCode," a number assigned to each program published in the TV section of most newspapers, cable TV listings, and even TV GUIDE magazine. Then, just enter the Plus Code of the program you want and the VCR is automatically programmed to record that show. It's that simple. You can preset up to six programs within a one month time frame. To take advantage of this function, you must first set up your Video/TV and assign channel positions to the various guide channels. For details, see "Setting Up VCR Plus+" on page 16.

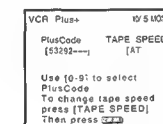
Before you begin

- Make sure that the time and date are set correctly. If not, refer to "Setting the Clock" on page 12.
- Make sure that the loaded cassette has its safety tab intact.

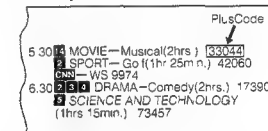
- 1 Press VCR plus. The VCR Plus+ menu appears.



- 2 Press the 0-9 buttons to enter the desired program's PlusCode.



Example of "PlusCode"



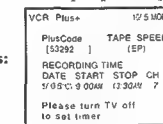
If you have made a mistake entering program's PlusCode
Press RESET and re-enter the correct number.

To check the timer setting
Press TIMER ON SCREEN. You can check the list of the timer settings.

The timer will not accept a setting in the following cases:

- When you enter the PlusCode of a program that has already ended.
- When you enter the PlusCode of a program that has already been set to record.
- If the 6 programs have already been preset, "6 programs have already been set" appears on the screen.

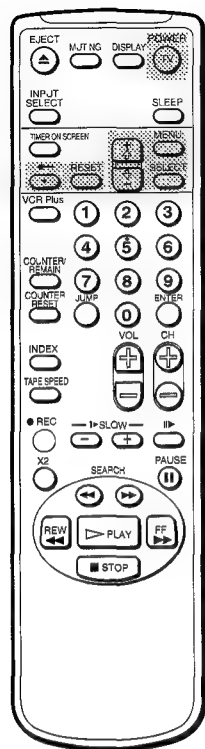
- 3 Press TAPE SPEED repeatedly to select SP, EP, or AT (automatic tape speed) and press SELECT. AT will automatically adjust the tape speed between SP and EP so that the program you selected fits in the tape. (Note that recording may stop if the tape is not long enough to record the program in EP mode.)
The recording information (date, start and stop times, channel number, and tape speed) appears in green.



Check that the information is correct. If it is not, press RESET to cancel the setting.

- 4 Repeat steps 2 to 3 to preset another timer setting.
- 5 Press POWER to turn the Video/TV off. The TIMER REC lamp on the front of the Video/TV lights up and the Video/TV enters recording standby mode.

Automatically Switching the Video/TV On or Off – ON/OFF TIMER

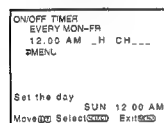


You can set the Video/TV to turn on and off at any time. Make sure the clock is set correctly. If it is not, set the clock first (page 12).

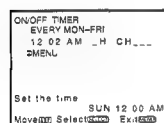
- 1 Press MENU to display the main menu.
- 2 Move the cursor (▶) to "TIMER" with + ◀ or ▶ and press SELECT. The TIMER menu appears.
- 3 Move the cursor (▶) to "ON/OFF TIMER" with + ◀ or ▶ and press SELECT. The ON/OFF TIMER menu appears.



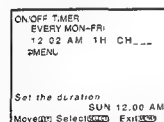
- 4 Press SELECT to enter the ON/OFF TIMER setting.
- 5 Press + ◀ or ▶ to set the day(s), and press SELECT. Each time you press + ◀ or ▶, the days change as shown below.
EVERY SUN-SAT → EVERY MON-FRI → SUNDAY → SATURDAY → EVERY SUNDAY → EVERY SATURDAY.



- 6 Press + ◀ or ▶ to set the time (hour then minute) that you want the Video/TV to turn on and press SELECT.



- 7 Press + ◀ or ▶ to set the duration time and press SELECT. With each press, the duration increases by one hour for up to twelve hours.

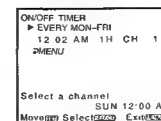


If you have made a mistake
Press ◀ to return to the previous position.

To erase the settings
Press RESET while the ON/OFF timer menu is displayed.

Note
If the OFF timer is activated during quick timer recording, the TV screen turns off, but the quick timer recording continues.

- 8 Press + ◀ or ▶ to set the channel and press SELECT.

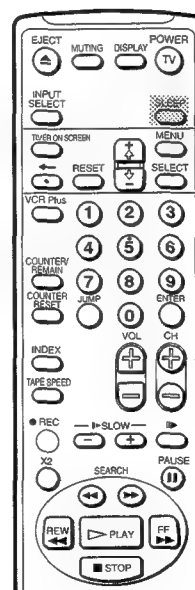


- 9 Press MENU to return to the original screen.

If you are not using the Video/TV, press POWER to set the Video/TV in standby mode.

One minute before the Video/TV turns off, the message "TV will turn off soon" appears on the screen.

Switching Off Automatically – Sleep Timer



You can automatically switch the Video/TV into standby mode after a selected time period.

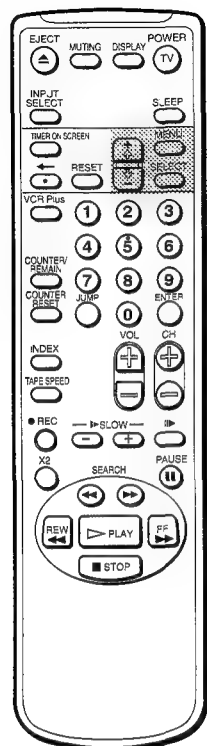
Press SLEEP

With each press, the time period (in minutes) changes as follows:

OFF → 30 → 60 → 90

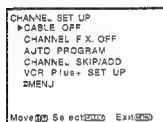
One minute before the TV switches into standby mode, the message "TV will turn off soon" is displayed on the screen.

Selecting the Video/TV's Cable Box Input Channel – CHANNEL FIX

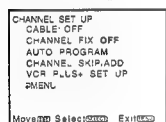


Use the CHANNEL FIX feature to prevent the Video/TV's input channel from being accidentally changed. It is recommended that you set up your Video/TV as follows when you connect a cable box.

- 1 Press MENU to display the main menu.
- 2 Move the cursor (▶) to "SET UP" with + ◀ or ▶ and press SELECT. The SET UP menu appears.
- 3 Move the cursor (▶) to "CHANNEL SET UP" with + ◀ or ▶ and press SELECT. The CHANNEL SET UP menu appears.



- 4 Move the cursor (▶) to "CHANNEL FIX" with + ◀ or ▶ and press SELECT. The selected position turns red.



- 5 Using + ◀ or ▶, select the Video/TV's cable box input channel that you want to set and press SELECT.

With each press, the input mode changes as follows:

OFF → 2 → 3 → 4 → 5 → 6 → LINE

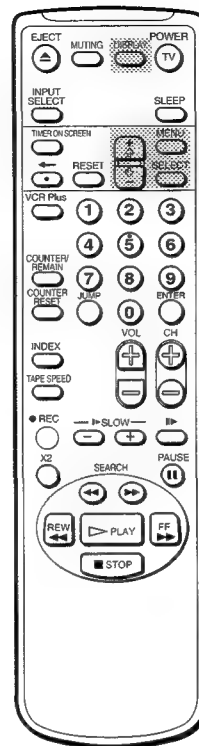
When you set CHANNEL FIX to "2-6," you can only watch the TV channel that you have fixed, or the input line.

When you set CHANNEL FIX to "LINE," you cannot switch the line input to a TV channel.

When you want to switch CHANNEL FIX off, set it to "OFF."

- 6 Press MENU to return to the original screen.

Displaying Caption Vision/XDS



Some programs are broadcast with Caption Vision. To display Caption Vision, select either CC1, CC2, TEXT1, or TEXT2 from the menu. CC1 or CC2 shows you an on-screen version of the dialogue or sound effects of a program. (The mode should be set to CC1 for most programs.) TEXT1 or TEXT2 shows you on-screen information presented using either half or the whole screen. It is not usually related to the program.

Some programs are broadcast with XDS (Extended Data Service) which shows a network name, program name, program length, call letters and time of the show. When you select XDS with the DISPLAY button, this information will be displayed on the screen if the broadcaster offers this service.

- 1 Press MENU to display the main menu.
- 2 Move the cursor (▶) to "SET UP" with + ◀ or ▶ and press SELECT. The SET UP menu appears.
- 3 Move the cursor (▶) to "CAPTION VISION" with + ◀ or ▶ and press SELECT. The caption setting turns red.



- 4 Using + ◀ or ▶, select the caption type you want and press SELECT.



- 5 Press MENU to return to the original screen.

Note

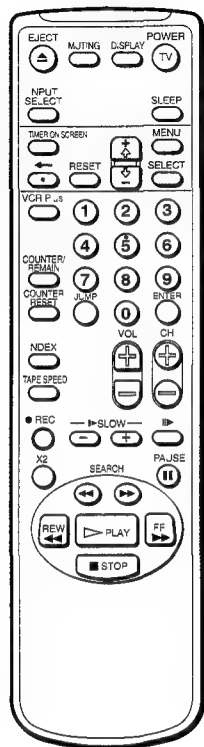
Poor reception of TV programs can cause errors in Caption Vision. Captions may appear with errors instead of the correct words.

To cancel caption display

Press DISPLAY repeatedly until "DISPLAY OFF" appears on the screen. With each press, the display changes as follows:

On-screen information — XDS — Caption Vision or Text
 DISPLAY OFF

Blocking Out Programs – Parental Control



If you have made a mistake
Press ◀ to return to the previous position.

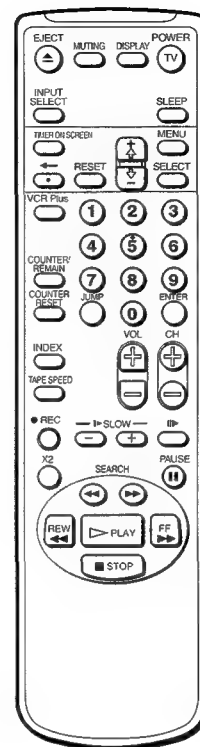
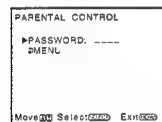
Note
When playing a tape on which blocked programs are recorded, the block will be effective in normal playback mode. In other tape operation modes or if the tape is well-worn or old, the block may not be effective.

The TV programs and movies shown on TV are given a rating signal based on the following rating systems.
In U.S.A.: U.S. Television Parental Guidelines to rate television programs (U.S. TV ratings), and Motion Picture Association of America (MPAA) Guidelines to rate movies including those shown on TV (movie ratings).
In Canada: Canadian English Language ratings to rate television programs in English, and Canadian French Language ratings to rate those in French.
To block programs you feel are unsuitable for your children, you need to set the TV for the desired rating systems. Sony's predetermined ratings are also available.
See pages 49 to 51 for a description of the ratings.
The Parental Control feature of the Video/TV functions by receiving the rating signal from your local broadcasting station or cable service provider.

Activating the Parental Control feature

First, set a password, then select your desired rating from Sony's predetermined ratings.

- 1 Press MENU to display the main menu.
- 2 Move the cursor (▶) to "SET UP" with + ◀ or ▶ and press SELECT. The SET UP menu appears.
- 3 Move the cursor (▶) to "PARENTAL CONTROL" with + ◀ or ▶ and press SELECT.
- 4 Move the cursor (▶) to "PASSWORD" with + ◀ or ▶ and press SELECT. The password position turns red.

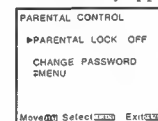


- 5 Enter a four digit password* using the 0-9 buttons.



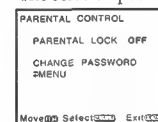
* Do not enter "4357" corresponding to "HELP" on a phone number pad. (See page 48.) If you enter "4357," "Invalid password, please try again" appears.

- 6 To confirm the password, re-enter the same password with the 0-9 buttons.
Your password is stored and the PARENTAL CONTROL menu automatically appears.

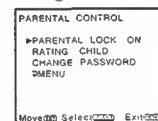


If you want to change the password, see page 47

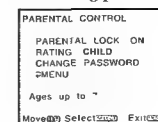
- 7 Move the cursor (▶) to "PARENTAL LOCK" with + ◀ or ▶ and press SELECT.
The selected position turns red.

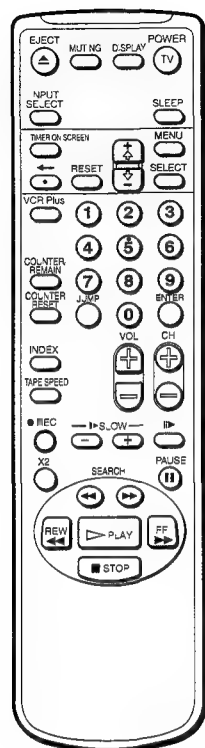


- 8 Using + ◀ or ▶, select "ON" and press SELECT.



- 9 Move the cursor (▶) to "RATING" with + ◀ or ▶ and press SELECT.
The rating position turns red.





- 10 Using + \diamond or - \diamond , select a desired rating ("CHILD," "YOUTH," or "YOUNG ADULT") and press SELECT.



If you want to select the ratings from "CUSTOM," go to step 4 of "Selecting custom ratings in U.S.A." on page 43 or "Selecting custom ratings in Canada" on page 46, according to your country.

- 11 Press MENU to return to the original screen.

To deactivate the Parental Control feature

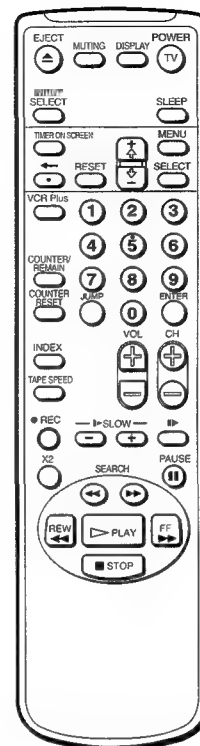
If you set "PARENTAL LOCK" in the PARENTAL CONTROL menu to "OFF," the Parental Control feature will not work and you can view all TV programs and movies shown on TV

- 1 Perform steps 1–4 of "Activating the Parental Control feature" on page 40.
- 2 Enter your four digit password using the 0-9 buttons. The PARENTAL CONTROL menu appears.
- 3 Move the cursor to "PARENTAL LOCK" with + \diamond or - \diamond and press SELECT. The selected position turns red.
- 4 Using + \diamond or - \diamond , select "OFF" and press SELECT.
- 5 Press MENU to return to the original screen.

To unlock the Parental Control feature temporarily

When you select a Parental Control program, no sound or picture except for a channel number will appear. The \mathbf{A} indicator is displayed. To view the program, follow the steps below.

- 1 Press ENTER to display the password screen.
- 2 Enter your password using the 0-9 buttons. Parental Control will be canceled ("PARENTAL LOCK" set to "OFF") until you turn your Video/TV off.



Selecting custom ratings in U.S.A.

If you want to select the ratings to be blocked from "CUSTOM" once you have activated the Parental Control feature (page 40), follow the procedure below.

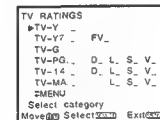
For a detailed description of each rating, see "What the Ratings Mean" on page 49.

- 1 Perform steps 1–4 of "Activating the Parental Control feature" on page 40.
- 2 Enter your four digit password using the 0-9 buttons. The PARENTAL CONTROL menu appears.
- 3 Move the cursor (\blacktriangleright) to "RATING" with + \diamond or - \diamond and press SELECT. The rating position turns red.
- 4 Using + \diamond or - \diamond , select "CUSTOM" and press SELECT. The CUSTOM RATINGS menu appears.

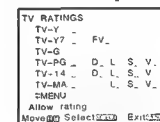


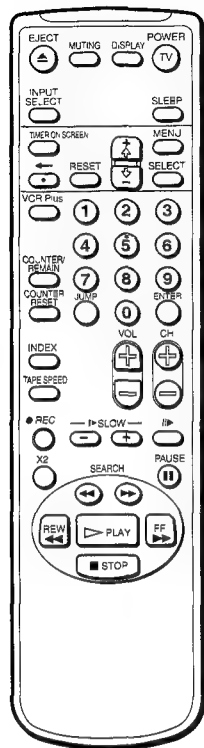
First, select TV ratings.

- 5 Move the cursor (\blacktriangleright) to "TV RATINGS" with + \diamond or - \diamond and press SELECT. The TV RATINGS menu appears.



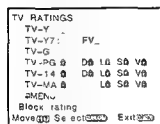
- 6 Move the cursor (\blacktriangleright) to the TV rating to be blocked with + \diamond or - \diamond and press SELECT. The selected position turns red.





- 7 Using + or -, select "a" and press SELECT.

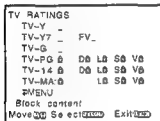
The "a" indicator automatically appears beside the selected rating and all "higher" ratings, indicating that the programs that match the ratings will be blocked.



Some ratings have additional content ratings called "extenders." The extenders are defined as follows: D (Sexually Suggestive Dialog), FV (Fantasy Violence), L (Coarse Language), S (Sexual Situations) and V (Violence). By setting the extenders, you can define additional viewing limits. For more details of extenders, see page 50. All of the extenders included in the selected ratings will be blocked. If you wish to allow any of them to be viewed, go to step 8.

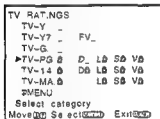
- 8 Select the extender to be viewed by pressing SELECT.

Each time you press SELECT, the selected position moves to the next extender.



- 9 Using + or -, select "-" and press SELECT.

"-" appears beside the selected extender, indicating that the programs that match the extender can be viewed.

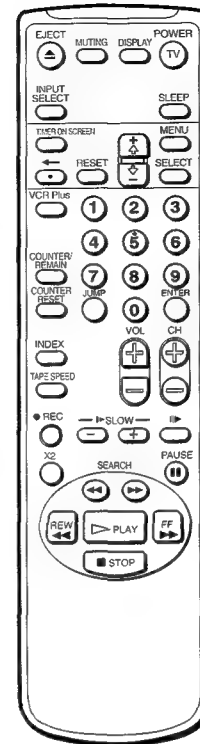


If you select "a," "a" is displayed to show that the programs that match the extender will be blocked again.

- 10 Repeat steps 8 and 9 for other extenders.

All programs that match the ratings you select and higher, except for the extenders that were canceled, will be blocked.

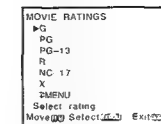
- 11 After setting of the TV ratings is complete, move the cursor (►) to "2MENU" with + or - and press SELECT to return to the CUSTOM RATINGS menu.



Second, select movie ratings.

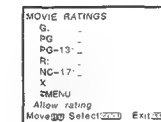
- 12 Move the cursor (►) to "MOVIE RATINGS" with + or - and press SELECT.

The MOVIE RATINGS menu appears.



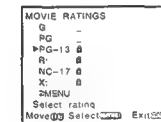
- 13 Move the cursor (►) to the movie rating to be blocked with + or - and press SELECT.

The selected position turns red.



- 14 Using + or -, select "a" and press SELECT.

The "a" indicator automatically appears beside the selected rating and all "higher" ratings, indicating that the programs that match the ratings will be blocked.

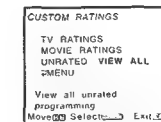


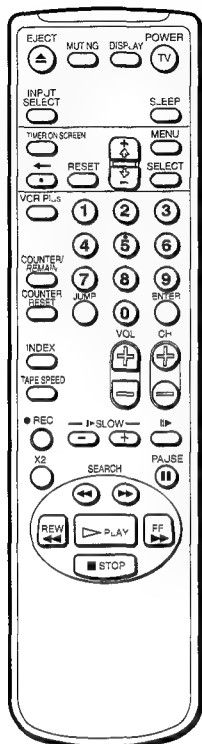
- 15 Press MENU to return to the original screen.

To block TV programs and/or movies for which a rating signal is not given (NR and N/A)

For a description of the NR and N/A ratings, see page 49.

- 1 Perform steps 1-4 of "Selecting custom ratings in U.S.A." on page 43.
2 Move the cursor (►) to "UNRATED" with + or - and press SELECT. The selected position turns red.





- 3 Using + or - , select the type of programs to be blocked and press SELECT.



Select	To block
VIEW ALL	No program (to view any unrated TV program and movie)
BLOCK TV	Unrated TV programs
BLOCK MOVIES	Unrated movies
BLOCK ALL	Unrated TV programs and movies

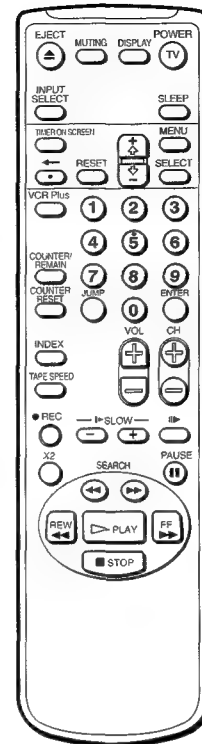
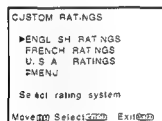
- 4 Press MENU to return to the original screen.

Selecting custom ratings in Canada

If you want to select the ratings to be blocked from "CUSTOM" once you have activated the Parental Control feature (page 40), follow the procedure below.

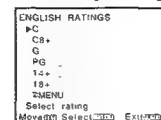
For a detailed description of each rating, see "What the Ratings Mean" on page 49.

- Perform steps 1-4 of "Activating the Parental Control feature" on page 40.
- Enter your four digit password using the 0-9 buttons. The PARENTAL CONTROL menu appears.
- Move the cursor to "RATING" with + or - and press SELECT. The rating position turns red.
- Using + or - , select "CUSTOM" and press SELECT. The CUSTOM RATINGS menu appears.

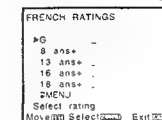


- 5 Using + or - , select the rating you want to block and press SELECT. The selected rating menu appears.

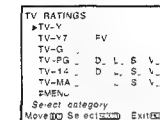
Canadian English ratings



Canadian French ratings

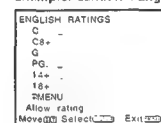


U.S. TV ratings

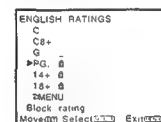


- 6 Move the cursor (▶) to the TV rating to be blocked with + or - and press SELECT. The selected position turns red.

Example: Canadian English ratings



- 7 Using + or - , select "G" and press SELECT. The G indicator automatically appears beside the selected rating and all "higher" ratings, indicating that the programs that match the ratings will be blocked.



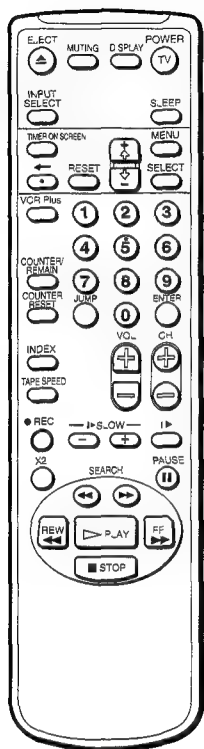
Some U.S. TV ratings have additional content ratings called "extenders," such as D, FV, L, S, and V. By setting the extenders, see steps 7 to 10 of "Selecting custom ratings in U.S.A." on page 43. For more details of extenders, see page 50.

All of the extenders included in the selected ratings will be blocked. If you wish to allow any of them to be viewed, go to step 8 of "Selecting custom ratings in U.S.A." on page 44.

- 8 Press MENU to return to the original screen.

Changing the password

- Perform steps 1-4 of "Activating the Parental Control feature" on page 40.
- Enter your four digit password using the 0-9 buttons. The PARENTAL CONTROL menu appears.



- 3 Move the cursor (▶) to "CHANGE PASSWORD" with + ◀ or ▶ and press SELECT.
The CHANGE PASSWORD menu appears.



- 4 Move the cursor (▶) to "PASSWORD" with + ◀ or ▶ and press SELECT.
The password position turns red.

- 5 Enter a new four digit password using the 0-9 buttons.




- 6 Enter the password set in step 5 again to confirm.
If you entered it incorrectly, "Password incorrect, please try again" appears.
Re-enter the correct password.

- 7 Press MENU to return to the original screen.

If you have forgotten your password

- 1 Perform steps 1-4 of "Activating the Parental Control feature" on page 40.
- 2 Enter the master password "4357" (corresponding to "HELP" on a phone number pad).
You can then store a new password.

Notes

- If you entered "4357" as your password the first time, you cannot store a password. (See step 5 of "Activating the Parental Control feature" on page 41.)
- When you select a Parental Control program and the  indicator is displayed on the screen, you cannot view that program even if you enter "4357." (See "To unlock the Parental Control feature temporarily" on page 42.)

What the Ratings Mean

Ratings in U.S.A.

Sony's predetermined ratings

These are original ratings that Sony predetermined according to the viewer's age. Each rating allows you to view the certain programs, as follows:

See below for a description of each rating.

Ratings	Viewable U.S. movie ratings	Viewable U.S. TV ratings
CHILD: Suitable for children under the age of 6	G, NR, and N/A	TV-Y, TV-G, and TV-NR
YOUTH: Suitable for children aged 7 and older	G, PG, NR, and N/A	TV-Y, TV-Y7, TV-G, TV-PG, and TV-NR
YOUNG ADULT: Suitable for children aged 13 and older	G, PG, PG-13, NR, and N/A	TV-Y, TV-Y7, TV-G, TV-PG, TV-14, and TV-NR

U.S. movie ratings

U.S. movie ratings are for movies (including those shown on TV) rated according to the Motion Picture Association of America (MPAA) Guidelines.

Ratings	Explanations
G (General Audiences—All Ages Admitted)	In G-rated films no strong words are used, the violence is at a minimum, nudity and sex scenes are not present, nor is there any drug use.
PG (Parental Guidance Suggested. Some Material May Not Be Suitable For Children)	This is a film which may need to be monitored first by parents.
PG-13 (Parents Strongly Cautioned. Some Material May Be Inappropriate For Children Under 13)	Parents are alerted to be very careful about the attendance of their under-teenage children when viewing.
R (Restricted, Under 17 Require Accompanying Parent Or Adult Guardian)	This film includes hard language, tough violence, nudity, drug abuse or other elements of concern.
NC-17 or X (No One 17 Or Under Admitted)	This is a film that most parents would consider not suitable for children aged 17 and under. There may be violence, sex, aberrational behavior, drug abuse or other elements of concern.
NR (Not Rated)	This is a film that a producer has not rated, intending to have his film widely released.
N/A (Not Applicable)	This is a film that a producer considers outside the scope of the MPAA ratings.

Note

NR and N/A ratings are shown together as "UNRATED" in the menu.

U.S. TV ratings

U.S. TV ratings are for TV programs rated according to the U.S. Television Parental Guidelines.

Ratings	Explanations
TV-Y (All Children)	This program is designed for young children aged 2+ and is appropriate for all children.
TV-Y7 (Directed to Older Children)	This program is designed for children aged 7 and above. Themes and elements in this program may include mild fantasy violence or slapstick violence, or may frighten children under the age of 7.
TV-G (General Audience)	Most parents would find this program suitable for all ages. It contains little or no violence, no strong language and little or no sexual dialog or situations.
TV-PG (Parental Guidance Suggested)	This program contains some material that parents may find unsuitable for younger children.
TV-14 (Parents Strongly Cautioned)	This program contains some material that many parents would find unsuitable for children under the age of 14.
TV-MA (Mature Audience Only)	This program is specifically designed to be viewed by adults and therefore may be unsuitable for children under the age of 17.
TV-NR (Not Rated/Unrated)	This is a program broadcast without any rating, such as news, news flashes or sports.

Note
The TV-NR rating is shown as “UNRATED” in the menu.

About the extenders of U.S. TV ratings

TV-Y7, TV-PG, TV-14 and TV-MA ratings have additional content ratings called “extenders” to define additional viewing limits. The extenders are defined as follows:

Extenders	Explanations
D (Sexually Suggestive Dialog)	Programs containing suggestive dialog, or sexual innuendo
FV (Fantasy Violence)	Programs containing cartoon violence occurring in TV-Y7 programs only
L (Coarse Language)	Programs containing coarse language
S (Sexual Situations)	Programs containing sexual content
V (Violence)	Programs containing violence. There may be some profanity, violence or brief nudity in these programs.

Ratings in Canada

Sony's predetermined ratings

These are original ratings that Sony predetermined according to the viewer's age. Each rating allows you to view the certain programs, as follows:
See below for a description of each rating.

Ratings	Viewable Canadian English Language ratings	Viewable Canadian French Language ratings	Viewable U.S. TV ratings
CHILD: Suitable for children under the age of 7	C and G	G	TV-Y, TV-G, and TV-NR
YOUTH: Suitable for children aged 8 and older	C, G, C8+ and PG	G and 8 ans+	TV-Y, TV-Y7, TV-G, TV-PG, and TV-NR
YOUNG ADULT: Suitable for children aged 14 and older	C, G, C8+, PG and 14+	G, 8 ans+, 13 ans+	TV-Y, TV-Y7, TV-G, TV-PG, TV-14, and TV-NR

Canadian English Language ratings

The Canadian English Language ratings are for TV programs in English broadcast in Canada.

Ratings	Explanations
C (Programming intended for children under age 8)	There will be no realistic scenes of violence or no offensive language, nudity or sexual content. Careful attention is paid to themes, which could threaten children's sense of security and well-being.
G (General Audience)	These programs contain very little violence, either physical or verbal or emotional. There may be some inoffensive slang, no profanity and no nudity.
C8+ (Programming generally considered acceptable for children 8 years and over to watch on their own)	Violence will not be portrayed as the preferred, acceptable, or only way to resolve conflict; or encourage children to imitate dangerous acts which they may see on television. There will be no profanity, nudity or sexual content.
PG (Parental Guidance)	Programming intended for a general audience but which may not be suitable for younger children. Parents may consider some content inappropriate for unsupervised viewing by children aged 8-13.
14+ (Programming contains themes or content which may not be suitable for viewers under the age of 14.)	Parents are strongly cautioned to exercise discretion in permitting viewing by pre-teens and early teens.
18+ (Adult)	These programs contain violence integral to the development of the plot, character or theme, intended for adult audiences. They may contain graphic language and explicit portrayals of nudity and/or sex.
E (Exempt)	Exempt programming includes: news, sports, documentaries and other information programming; talk shows, music videos, and variety programming.

Note
The E (Exempt) rating is not shown in the menu.

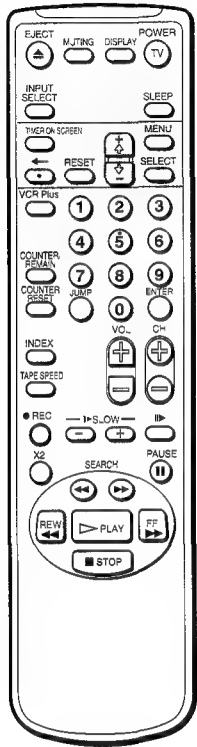
Canadian French Language ratings

The Canadian French Language ratings are for TV programs in French broadcast in Canada.

Ratings	Explanations
G (General)	Programming intended for audience of all ages. These programs contain no violence, or the violence they contain is minimal or is depicted appropriately with humor or caricature or in an unrealistic manner.
8 ans+ (8+ General - Not recommended for young children)	Programming intended for a broad audience but contains light or occasional violence that could disturb young children. Viewing with an adult is recommended for young children (under the age of 8).
13 ans+ (Programming may not suitable for children under the age of 13.)	Viewing with an adult is strongly recommended for children under 13.
16 ans+ (Programming is not suitable for children under the age of 16.)	These programs contain frequent scenes of violence or intense violence.
18 ans+ (Programming restricted to adults)	These programs contain constant violence or scenes of extreme violence.
E (Exempt)	Exempt programming.

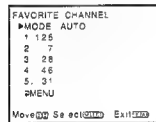
Note
The E (Exempt) rating is not shown in the menu.

Setting Your Favorite Channels – FAVORITE CHANNEL

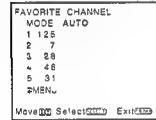


The FAVORITE CHANNEL feature allows your Video/TV to memorize the channels that you watch the most. If the feature is set to AUTO, the last five channels you selected with the 0-9 buttons are automatically set as your favorite channels. If you want to input your own selection of channels, set the feature to MANUAL.

- 1 Press MENU to display the main menu.
- 2 Move the cursor (▶) to "SET UP" with + ◀ or ▶ and press SELECT.
- 3 Move the cursor (▶) to "FAVORITE CHANNEL" with + ◀ or ▶ and press SELECT. The FAVORITE CHANNEL menu appears.

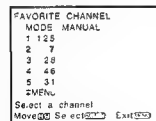


- 4 Press SELECT to set the mode. The MODE position turns red.
- 5 Select "AUTO" or "MANUAL" with + ◀ or ▶ and press SELECT. If you select AUTO, skip steps 6 through 8. The last five channels you selected with the 0-9 buttons are automatically set as your favorite channels.



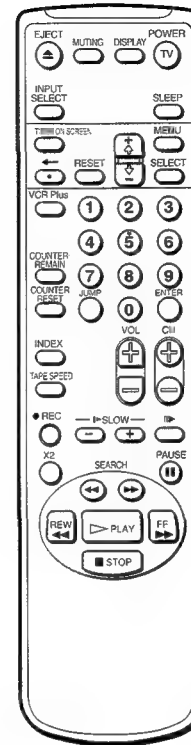
If you select MANUAL, the favorite channel numbers become white, indicating that favorite channels can be entered.

- 6 Move the cursor (▶) with + ◀ or ▶ to select a channel and press SELECT. The selected position turns red.

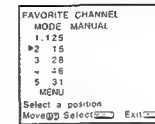


If you have made a mistake
Press ◀ to return to the previous position.

To erase the settings
Press RESET while the FAVORITE CHANNEL menu is displayed.



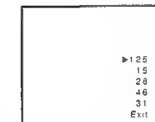
- 7 Using + ◀ or ▶, select the channel that you want to set as your favorite channel and press SELECT.



- 8 Repeat steps 6 and 7 to set the other favorite channels.
- 9 Press MENU to return to the original screen.

Selecting your favorite channels

- 1 Press SELECT. The favorite channels menu appears.



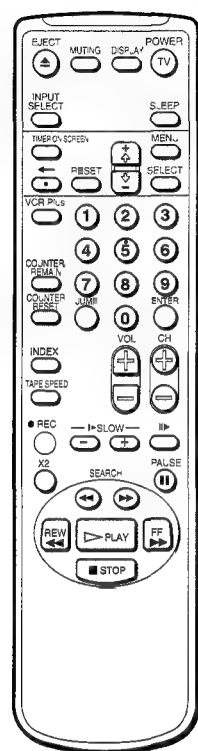
- 2 Move the cursor (▶) with + ◀ or ▶ to select the channel you want to watch and press SELECT. The selected channel will appear on the screen.

To exit the favorite channel menu

Press + ◀ or ▶ to select "Exit" and press SELECT.

Searching Using the Index Function

29



The Video/TV automatically marks the tape with an index signal at the point where each recording begins. These signals can be used to find a specific recording.

Playing back to the beginning of each program – Index Scan

- 1 Insert a tape with index signals.
- 2 Press INDEX once during playback.
- 3 Press ►► FF or ◀◀ REW to search for individual programs ahead or behind the current position.
The tape rewinds or rapidly advances to the next index signal. Each time an index signal is detected, the index scan number appears and the tape plays for about 5 seconds, then rewinds or rapidly advances to the next index signal.



- 4 Press PLAY ► at the desired program.

Locating the desired program – Index Search

You can locate a desired program and play it back by designating how many index signals to skip ahead or behind the current position.

- 1 Insert a cassette with index signals.
- 2 Press INDEX.
- 3 Using the 0-9 buttons, enter the number of index signals you want to skip. For example, if the tape at INDEX 02 and you want to locate INDEX 05, press 0 and 3.
- 4 Press ►► FF or ◀◀ REW to begin the search for the program ahead or behind the current position.
"INDEX SEARCH 03" appears on the screen. When the desired signal is found, playback begins automatically.



To stop searching
Press STOP ■.

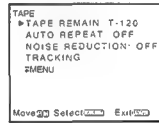


Enhancing Video Picture Quality

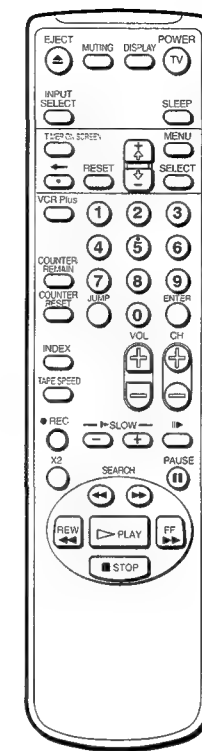
Adjusting the tracking automatically

The tracking condition is automatically adjusted on this Video/TV. The AUTO TRACKING indicator will appear for three seconds while the Video/TV is searching for the best tracking condition.

Adjusting the tracking manually

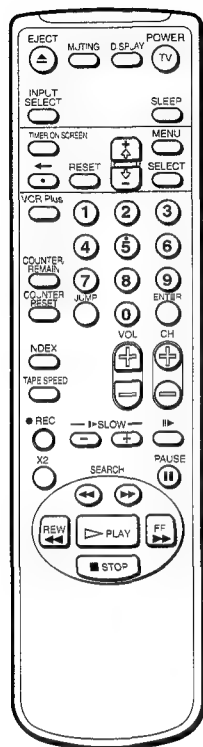
If streaks or snow noise appear on the screen during normal playback or slow picture, adjust the picture tracking condition manually.

- 1 Press MENU to display the main menu.
- 2 Move the cursor (►) to "TAPE" with + ◀ or – ◀ and press SELECT. The TAPE menu appears.

- 3 Move the cursor (►) to "TRACKING" with + ◀ or – ◀ and press SELECT. The TRACKING menu appears.

- 4 Select "TRACKING ADJUST" with + ◀ or – ◀ and press SELECT. The tracking meter appears.

- 5 Using + ◀ or – ◀, adjust the tracking until the picture is clear.
- 6 Press SELECT.
The TRACKING menu reappears.
- 7 Press MENU to return to the original screen.



To return to automatic tracking
Set AUTO to ON in the TRACKING menu with + ◀ or – ◀ and press SELECT.

Reducing the Picture Noise

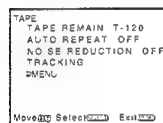


You can automatically reduce the picture noise on the video playback picture by setting NOISE REDUCTION to ON. Use this feature when you are playing a well-worn or old video, such as a rental video.

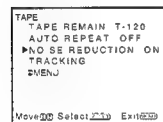
- 1 Press MENU to display the main menu.
- 2 Move the cursor (►) to "TAPE" with + or - and press SELECT. The TAPE menu appears.



- 3 Move the cursor (►) to "NOISE REDUCTION" with + or - and press SELECT. The selected position turns red.



- 4 Using + or -, select "ON" and press SELECT. The picture noise is reduced.

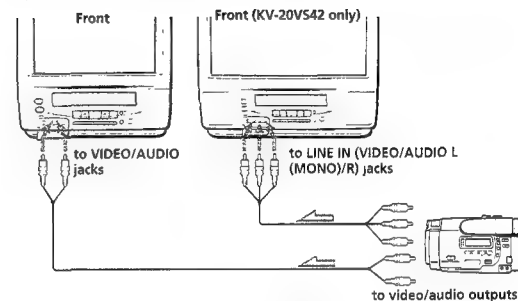


- 5 Press MENU to return to the original screen.

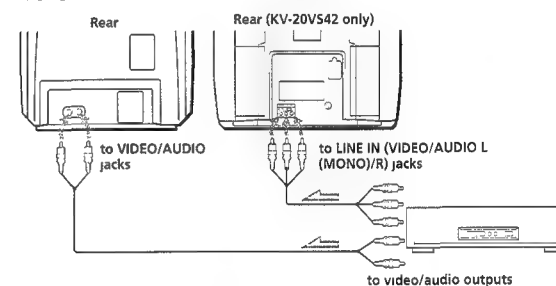
Connecting Optional Equipment

Watching the picture input from optional equipment

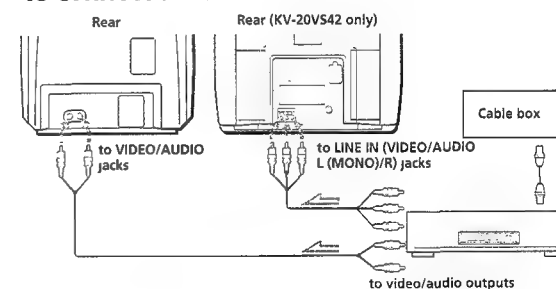
To connect a video camera



To connect a VCR without a cable box



To connect a VCR with a cable box



To watch the video input signal

Press INPUT SELECT so that "LINE" appears on the screen.

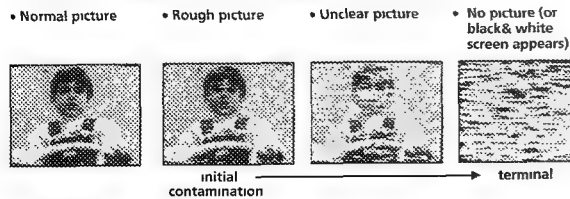
Notes

- When connecting optional equipment, such as videogames, please use the connecting cables recommended by the equipment's manufacturer.
- To connect monaural video equipment, connect the audio output of the video equipment to AUDIO L (MONO) of the video TV (KV-20VS42 only).

Troubleshooting

Function	Problems	Possible causes and remedies
TV reception	No picture (screen is dark), no sound	<ul style="list-style-type: none"> The AC power cord is disconnected. <ul style="list-style-type: none"> ➔ Connect the AC power cord. The Video/TV is switched off. <ul style="list-style-type: none"> ➔ Press POWER.
	Good picture but no sound	<ul style="list-style-type: none"> The headphones are connected to the jack. <ul style="list-style-type: none"> ➔ Disconnect the headphones. MUTING is displayed on the screen. <ul style="list-style-type: none"> ➔ Press MUTING. Verify your audio mode (KV-20VS40 only). <ul style="list-style-type: none"> ➔ Check the MTS setting in the AUDIO menu. Press VOL+. Check antenna/cable connections. (page 5)
	No color or poor color (screen is dark) for color programs, but good sound.	<ul style="list-style-type: none"> Adjust "PICTURE," "BRIGHTNESS," "COLOR," "HUE," and "SHARPNESS" in the VIDEO menu. (page 19)
	No picture, no sound from video input source	<ul style="list-style-type: none"> The connecting cord between the Video/TV and the input source is disconnected. <ul style="list-style-type: none"> ➔ Connect it firmly. Input is not selected correctly. <ul style="list-style-type: none"> ➔ Press INPUT SELECT until the desired input indicator appears. (page 47)
	Cannot receive VHF or UHF channels when using an antenna.	<ul style="list-style-type: none"> Cable setting is not correct. <ul style="list-style-type: none"> ➔ Set CABLE to OFF.
Clock and timer	TV is fixed to one channel	<ul style="list-style-type: none"> Cable setting is not correct. <ul style="list-style-type: none"> ➔ Set CHANNEL FIX to OFF.
	The clock has stopped and "—/—" is displayed.	<ul style="list-style-type: none"> The power has been interrupted or the AC power cord is disconnected for more than 30 minutes. <ul style="list-style-type: none"> ➔ Re-set the clock and timer settings if necessary. (pages 15, 30)
Playback	Power is on, but the tape does not run.	<ul style="list-style-type: none"> Moisture has condensed in the Video/TV. <ul style="list-style-type: none"> ➔ Turn the power off, unplug the AC power cord and leave the Video/TV for about one hour.
	Poor playback picture	<ul style="list-style-type: none"> Adjust the tracking. (page 45) The video heads are dirty. <ul style="list-style-type: none"> ➔ The video heads are dirty (see below). Clean the video heads using a Sony video head cleaning cassette. If Sony cleaning cassettes are not available in your area, have the heads cleaned at your nearest Sony service facility (a standard service charge will be required). Do not use a commercially available liquid type cleaning cassette other than Sony's, as they may damage the video heads. ➔ The video heads may have to be replaced. Consult your local Sony dealer for more information.

Symptoms caused by contaminated video heads



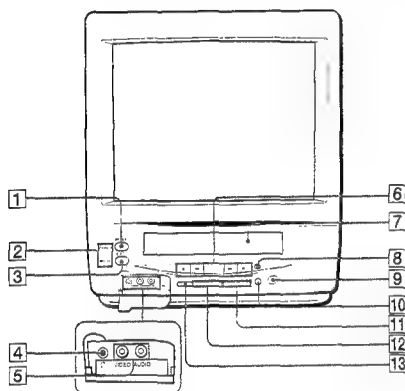
Function	Problems	Possible causes and remedies
Playback	The sound drops out.	<ul style="list-style-type: none"> The tape is defective. <ul style="list-style-type: none"> ➔ Use a new tape.
Recording	The cassette is ejected when you press REC ●.	<ul style="list-style-type: none"> The safety tab of the cassette has been removed. <ul style="list-style-type: none"> ➔ Cover the tab hole with adhesive tape, or use another cassette with a safety tab. (page 25)
	Recording does not function.	<ul style="list-style-type: none"> No cassette has been inserted. <ul style="list-style-type: none"> ➔ Insert a cassette with the safety tab. The tape is at its end. <ul style="list-style-type: none"> ➔ Rewind the tape.
Timer recording	Timer settings cannot be made.	<ul style="list-style-type: none"> The clock has not been set. <ul style="list-style-type: none"> ➔ Set the current time and date. (page 12) You made a mistake when setting the timer. <ul style="list-style-type: none"> ➔ Check the setting steps. (pages 30 through 32)
	The cassette is ejected when you press POWER to set the timer.	<ul style="list-style-type: none"> The safety tab of the cassette has been removed. <ul style="list-style-type: none"> ➔ Cover the tab hole with adhesive tape, or use another cassette with a safety tab.
	The TIMER REC lamp does not light up even though you press POWER to set the timer.	<ul style="list-style-type: none"> No cassette has been inserted. <ul style="list-style-type: none"> ➔ Insert a cassette with its safety tab. No setting was made for the timer. <ul style="list-style-type: none"> ➔ Set the timer to record a program. (pages 30 through 32)
	Timer recording was not made.	<ul style="list-style-type: none"> You did not press POWER to turn off the Video/TV and set the timer. There has been a power interruption lasting more than 30 minutes.
	No sound is recorded on the audio track.	<ul style="list-style-type: none"> The Multichannel TV Sound feature was set to SAP but a SAP program was not being broadcast. (KV-20VS40 only) <ul style="list-style-type: none"> ➔ Set the MTS setting to STEREO or MONO.
Others	A cassette cannot be inserted.	<ul style="list-style-type: none"> Another cassette is already inserted. <ul style="list-style-type: none"> ➔ Press EJECT to eject the cassette.
	The remote control does not work.	<ul style="list-style-type: none"> The batteries are low. <ul style="list-style-type: none"> ➔ Replace the batteries. (page 4) The batteries are installed incorrectly. <ul style="list-style-type: none"> ➔ Install the batteries with correct polarities. (page 4)
	The VCR does not operate.	<ul style="list-style-type: none"> Moisture condensation occurred. <ul style="list-style-type: none"> ➔ Turn the power off, unplug the AC power cord and leave the Video/TV to dry for over one hour.

Index to Parts and Controls

Video/TV set—front

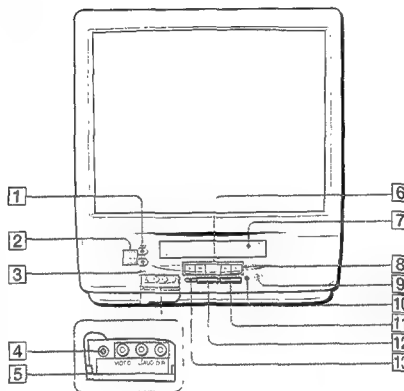
This section briefly describes the buttons and controls on the Video/TV set and on the remote control. For more information, refer to the pages next to each description.

KV-13VM42, KV-13VM43



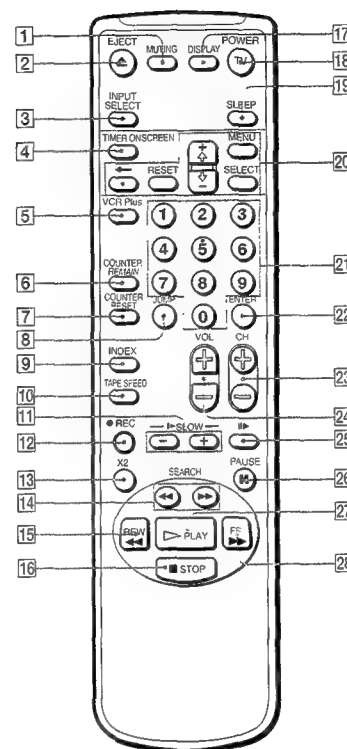
- 1 POWER button (pages 6, 12, 18)
- 2 Lamps
 - /STANDBY (page 18)
 - REC (recording) (page 29)
 - TIMER REC (recording) (pages 32, 35)
- 3 EJECT button (page 25)
- 4 □ (headphones) jack (page 24)
- 5 VIDEO/AUDIO L(MONO)/R jacks (KV-20VS42 only) (page 57)
 VIDEO/AUDIO jacks (KV-13VM42, KV-13VM43, and KV-20VM42 only) (page 57)
- 6 Tape transport buttons (page 26)

KV-20VM42, KV-20VS42



- 7 Cassette compartment (page 25)
- 8 REC (recording) ● button (page 29)
- 9 Remote sensor
- 10 QUICK TIMER REC button (page 34)
- 11 CHANNEL +/- buttons (pages 18, 29)
- 12 VOL (volume) +/- buttons (page 18)
- 13 INPUT SELECT button (pages 24, 29, 57)

Remote control

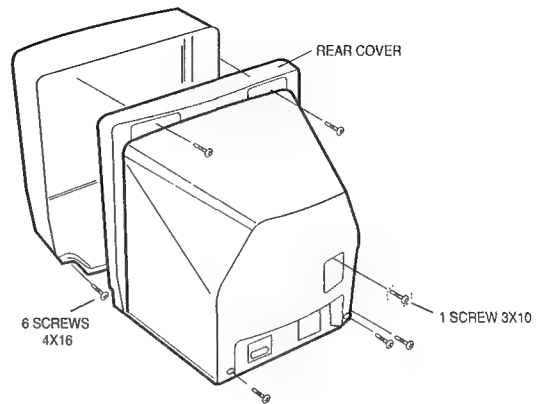
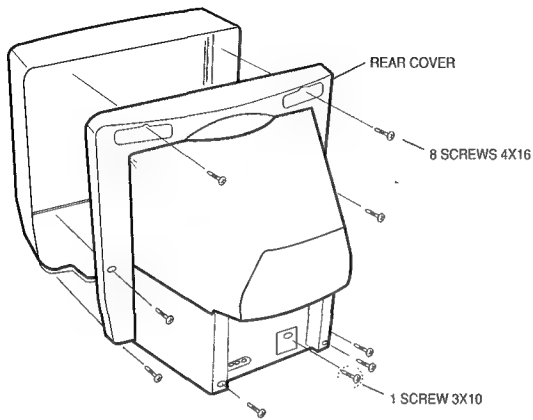


- 1 MUTE (muting) (page 18)
- 2 EJECT button (page 25)
- 3 INPUT SELECT (pages 24, 29, 57)
- 4 TIMER ON SCREEN (pages 30, 32, 33)
- 5 VCR Plus (page 35)
- 6 COUNTER/REMAIN (page 28)
- 7 COUNTER RESET (pages 25, 28)
- 8 JUMP (page 18)
- 9 INDEX (page 54)
- 10 TAPE SPEED (pages 29, 35)
- 11 SLOW button +/- (page 26)
- 12 REC (recording) ● (page 29)
- 13 X2 (page 26)
- 14 SEARCH button (page 26)
- 15 REW (rewind) button (page 26)
- 16 STOP button (page 26)
- 17 DISPLAY (pages 24, 28)
- 18 POWER (pages 6, 12, 18)
- 19 SLEEP (page 37)
- 20 Menu operation (pages 7, 19, 36, 40)
 MENU
 SELECT
 + ◊ / - ◊
 RESET
 ◀ (back space)
- 21 0-9 (pages 18, 29, 35, 41)
- 22 ENTER (pages 17, 43)
- 23 CH (channel) +/- (pages 18, 29)
- 24 VOL (volume) +/- (page 18)
- 25 PAUSE button (page 26)
- 26 PAUSE button (pages 26, 29)
- 27 PLAY button (page 26)
- 28 FF (fast forward) (pages 26, 54)

SECTION 2 DISASSEMBLY

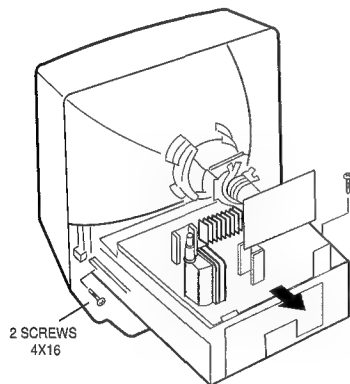
2-1. REAR COVER REMOVAL

- KV-20VM40 / 20VS40
- KV-20VM42 / 20VS42
- KV-13VM40 / 13VM41
- KV-13VM42 / 13VM43

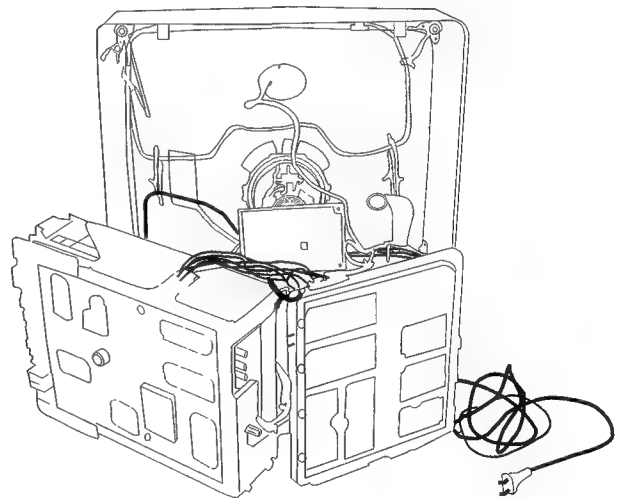


2-2. CHASSIS ASSY REMOVAL

- KV-20VM40 / 20VS40 / 20VM42 / 20VS42
- KV-13VM40 / 13VM41 / 13VM42 / 13VM43



2-3. SERVICE POSITION

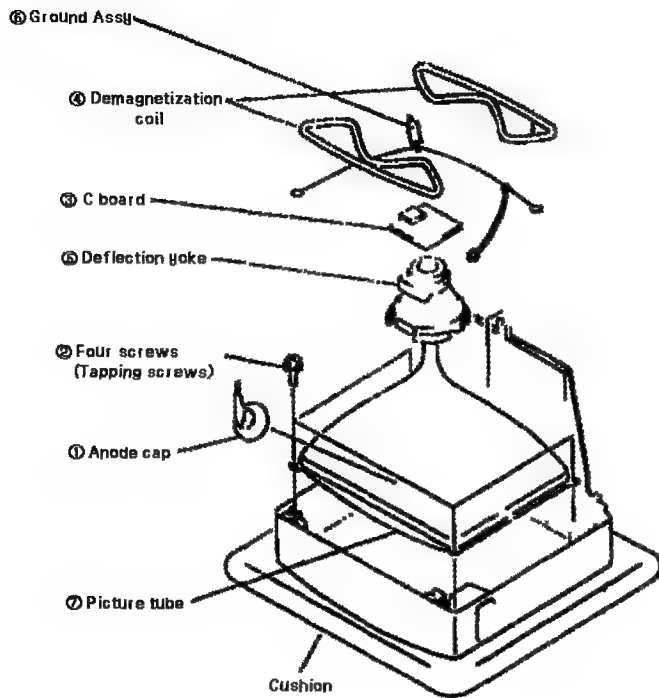


- Remove left or right side speaker connector before pulling off chassis assy.

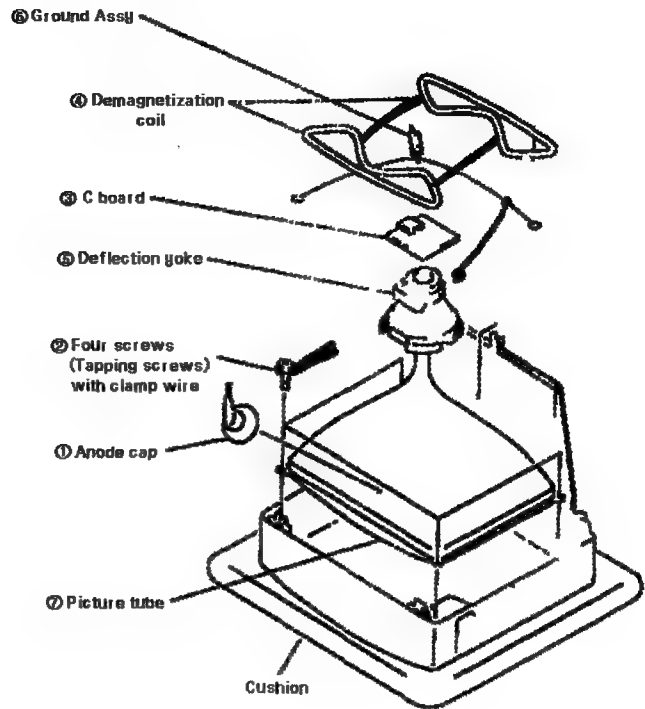
KV-20VM40 / 20VM42 KV-13VM40 / 13VM41 KV-13VM42 / 13VM43	1 speaker
KV-20VS40 / 20VS42	2 speaker

2-4. PICTURE TUBE REMOVAL

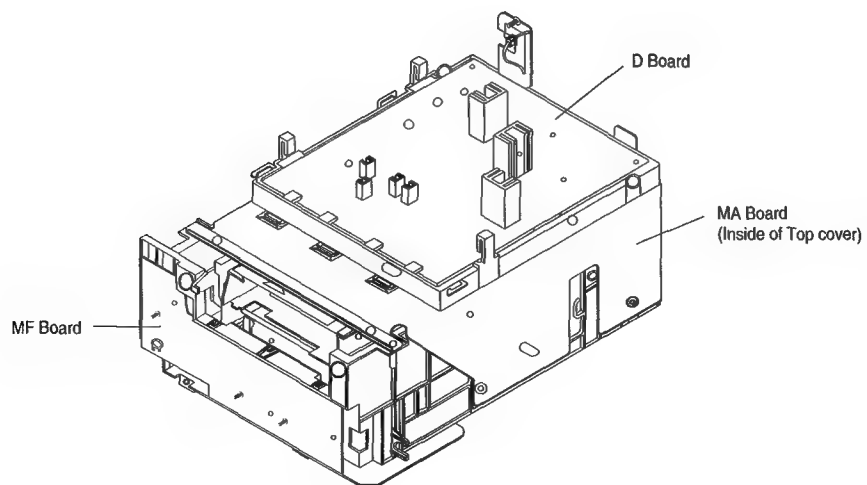
- KV-13VM40 / 13VM41
- KV-13VM42 / 13VM43



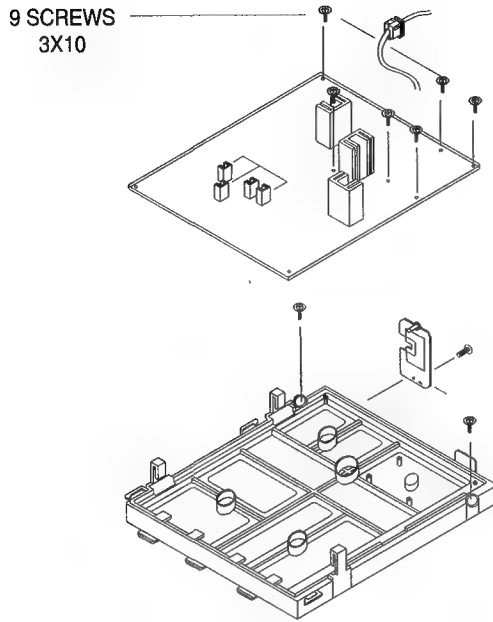
- KV-20VM40 / 20VS40
- KV-20VM42 / 20VS42



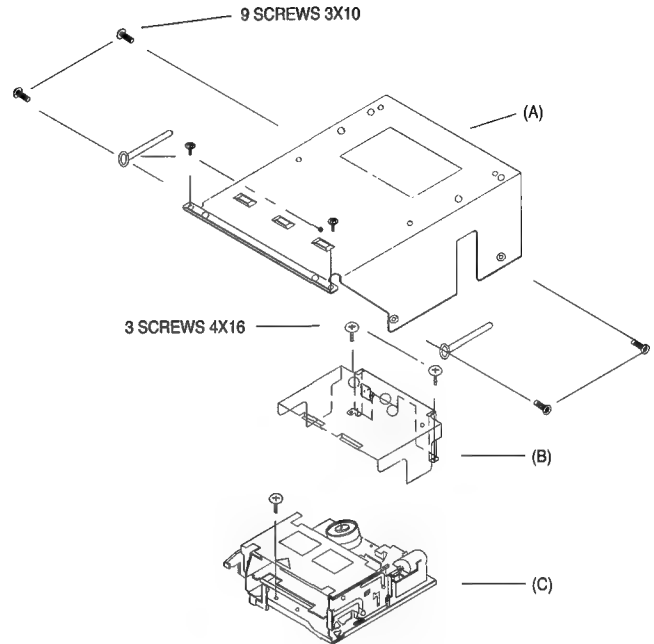
2-5. CIRCUIT BOARDS ARRANGEMENT



2-6. D BOARD DISASSEMBLY



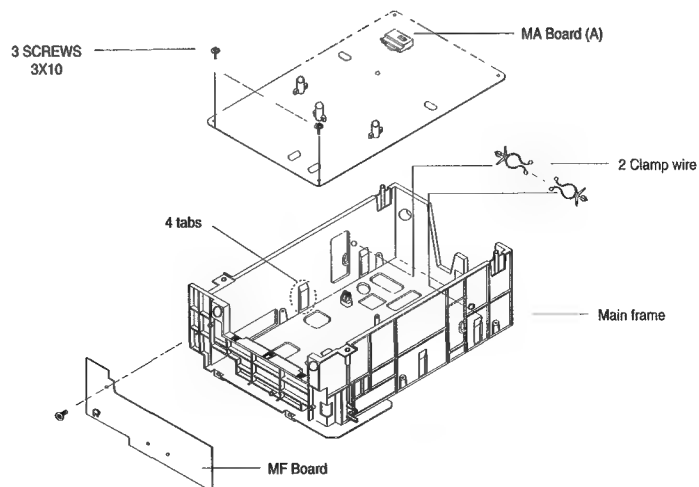
2-7. TOP CASE & DECK ASSY DISASSEMBLY



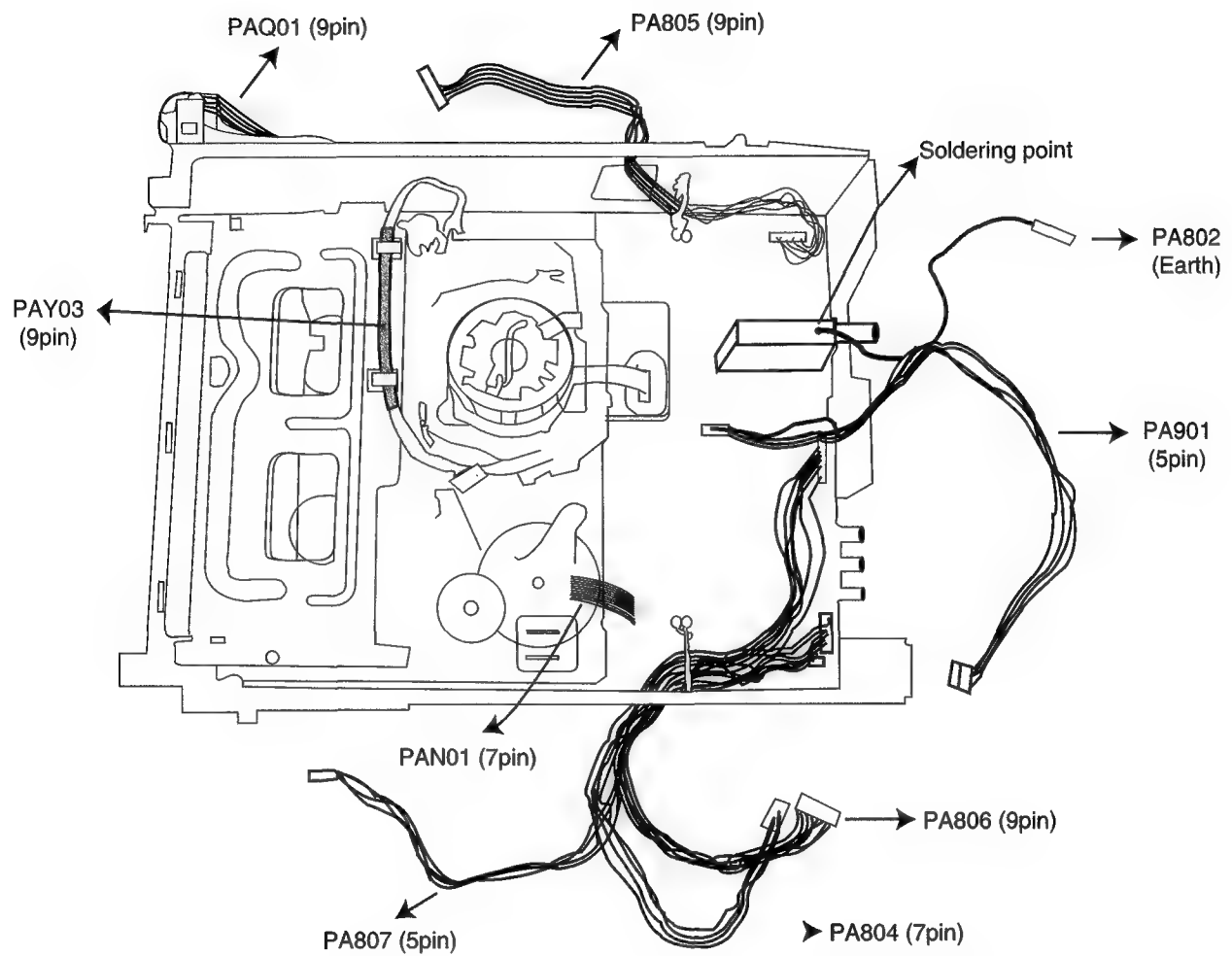
- 1) Remove the top case (A) by removing 6 screws over the main frame.
- 2) Remove the shield cover (B) by removing 2 screws over the clock assy.
- 3) Remove deck assy (C) by removing 1 screw on the MA board.

2-8. MA & MF BOARD DISASSEMBLY

- 1) Remove 2 screws and 2 clamp wire before pull off MA board.
- 2) Remove MA board by pressing the 4 tabs
- 3) Remove 2 screws.
- 4) Remove MF board.



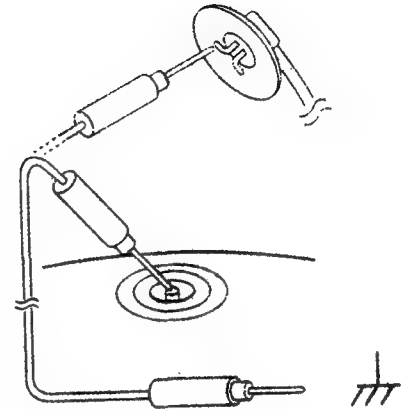
2-9. When you remove the top case



• HOW TO HANDLE AN ANODE CAP

NOTE : Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

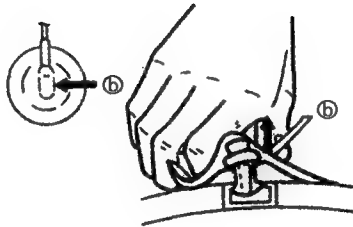
CAUTION: Anode-cap must be removed after discharge.



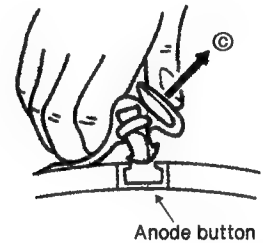
• REMOVING PROCEDURES



① Turn up one side of the rubber cap in the direction indicated by the arrow ①.



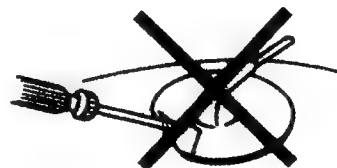
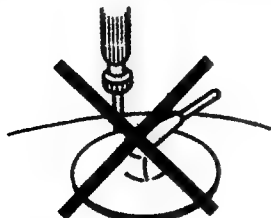
② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ②.



③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow ③.

• HOW TO HANDLE AN ANODE-CAP

- ① Don't hurt the surface of anode-caps with sharp objects!
- ② Don't press the rubber or you will hurt the inside of the anode-cap.
A material fitting called as shatter-hook terminal is built in the rubber.
- ③ Don't force the rubber Anode Cap off or you might cause the shatter Hook to puncture the Anode Cap.



SECTION 3

SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete re-alignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted.

The controls and switches should be set as follows unless otherwise noted.

Standard Picture condition:	PICTURE	100%
	BRIGHT	50%
	HUE	50%
	COLOR	50%
	SHARPNESS	50%

Perform the adjustments in order as follows:

1. Beam Landing
2. Convergence
3. Focus
4. H-line and White Balance

Note : Test Equipment Required.

1. Color bar Pattern Generator
2. Degausser
3. DC Power Supply
4. Digital multimeter

Preparations :

- Input a white signal.
- Before starting, degauss the entire screen.

3-1. BEAM LANDING

- 1) Input a raster signal with the pattern generator.
- 2) Loosen the deflection yoke mounting screw, and set the purity control to the center as shown in Fig.2
- 3) Input a green raster.
- 4) Move the deflection yoke backward, and adjust with the purity control so that green is in the center and red and blue are at the sides evenly. (Fig. 3)
- 5) Move the deflection yoke forward, and adjust so that the entire screen becomes green. (Fig. 2)
- 6) Switch the raster signal to red and blue and confirm the condition.
- 7) When the position of the deflection yoke is determined, tighten it with the deflection yoke mounting screw.
- 8) When landing at the corner is not right, adjust by using the disk magnets. (Fig. 4)

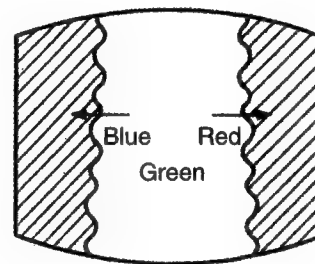


Fig. 3

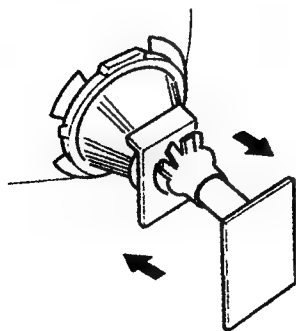


Fig. 1

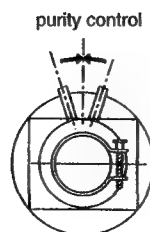


Fig. 2

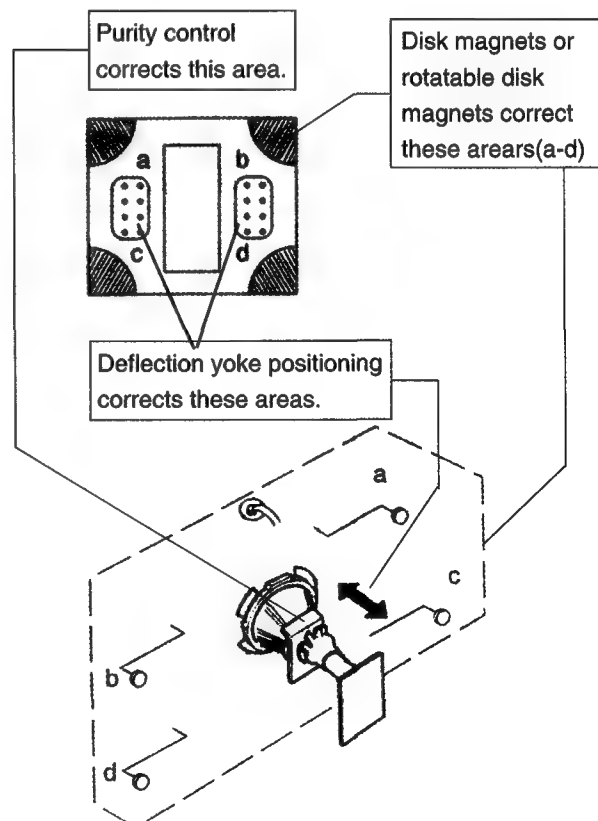


Fig. 4

3-2. CONVERGENCE

Preparation:

- Before starting, perform FOCUS, H.SIZE and V.SIZE adjustments
- Set BRIGHTNESS control to minimum.
- Input a dot signal

(1) Horizontal and vertical Static Convergence

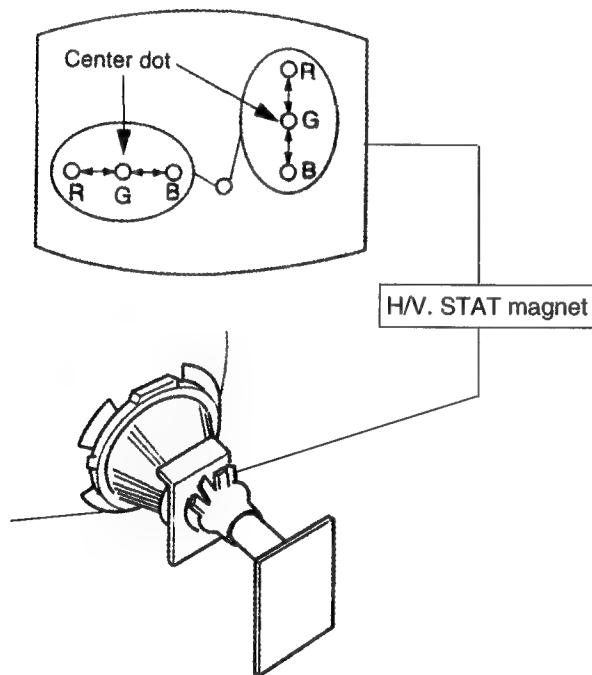


Fig. 5

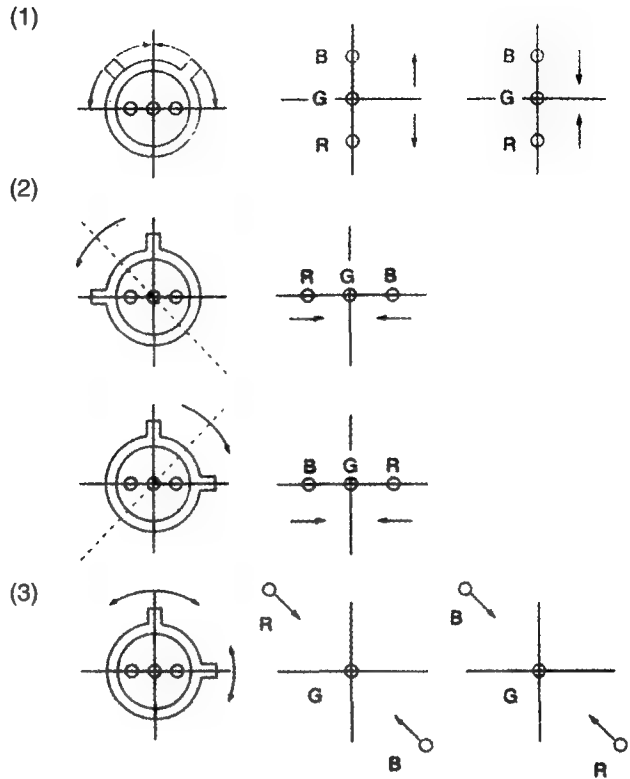
DY Information

- KV-13VM40/13VM41
P/N : 8-451-418-72
SPEC : Y14NDA
- KV-20VM40/20VS40
P/N : 8-451-440-11
SPEC : Y21NXA

- Tilt The H/V. STAT magnet and adjust static convergence to open or close the H/V. STAT magnet.



- When the H/V. STAT magnet is move in the direction of arrow (a) and (b), red, green and blue dots move as shown below



If the blue dot does not cover with red and green dots, refer to Fig. 6 perform the following steps

1. Move BMC magnet (a) to correct insufficient H. static convergence
2. Rotate BMC magnet (b) to correct insufficient V. static convergence

In either case, repeat Beam Landing Adjustment.

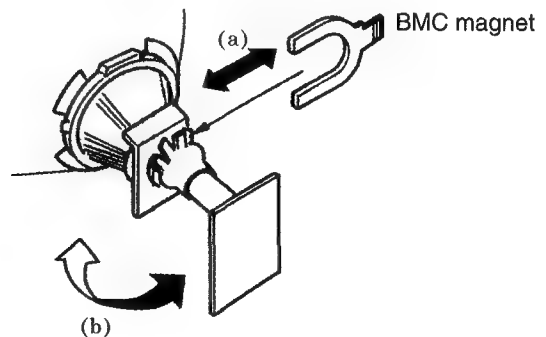


Fig. 6

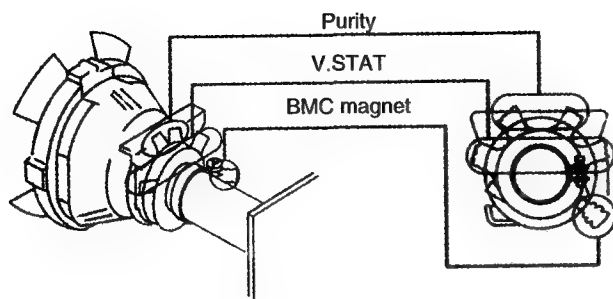


Fig. 7

(2) Dynamic Convergence Adjustment

Preparation:

- Before starting, perform Horizontal and Vertical static convergence Adjustment.
- 1 Slightly loosen deflection yoke screw.
 2. Remove deflection yoke spacers.
 3. Move the deflection yoke for best convergence as shown below.
 4. Tighten the deflection yoke screw.
 5. Install the deflection yoke spacers.

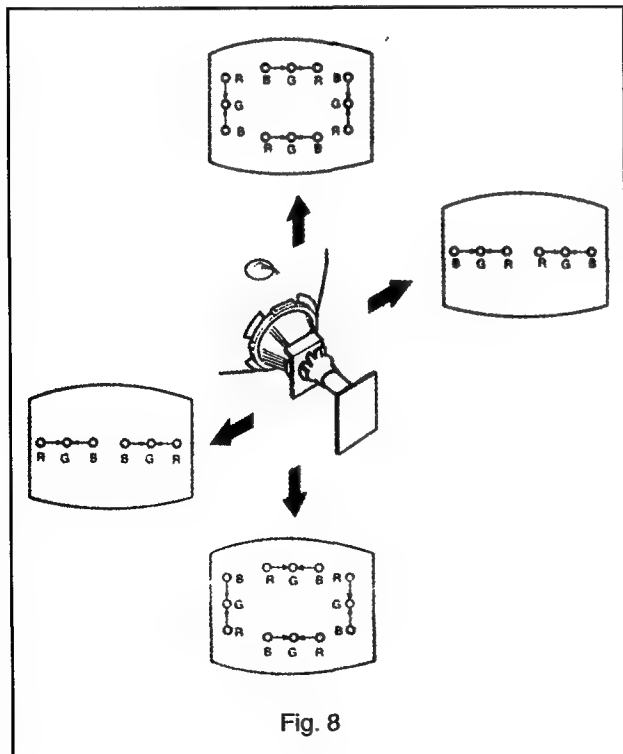


Fig. 8

(3) Screen-corner Convergence

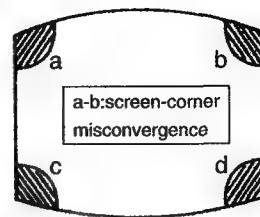
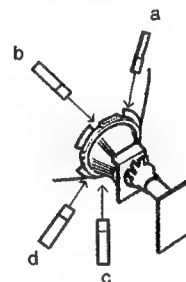


Fig. 9



Affix a permalloy ass'y corresponding to the misconverged areas



Permalloy assembly

3-3. FOCUS adjustment

Set the CONTRAST to max, BRIGHT to center.

Receive the monoscope signal.

In case of KV-13VM40, 13VM41

Turn the focus control (R937) knob on the C board to obtain the best focus in the center and circumference.

In case of KV-20VM40, 20VS40

Turn the focus control volume of the FBT (T402) on the D board to obtain the best focus in the center and circumference.

3-4. SCREEN adjustment

- 1) Set to service mode and select SCN in service mode Using [1], [4] buttons.
- 2) Press [3], [6] buttons to set horizontal line on the Screen.

3) In case of KV-13VM40, 13VM41

Turn the screen control (R936) knob on the C board until the horizontal line disappeared.

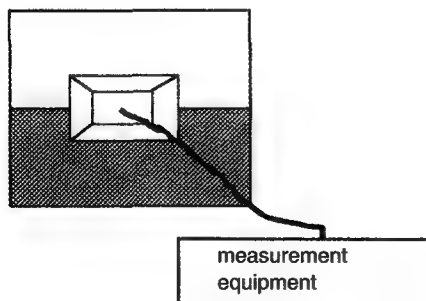
In case of KV-20VM40, 20VS40

Turn the screen control of the FBT(T402) on the D board until the horizontal line disappeared.

- 4) Press [3], [6] buttons again to return normal screen.

3-5. White Balance adjustment

- 1) Receive multi display signals from A/V jack.
- 2) Attach the measurement equipment.



- 3) Set to service mode and select following items in service mode Using [1], [4] buttons.

GDR : G Drive
BDR : B Drive
ROF : R Bias
GOF : G Bias
BOF : B Bias

- 4) Adjust color coordinator to followings. Using [3], [6] buttons in each item.

In case of 13VM40/13VM41

- High beam: Y=200, 283/288
- Low beam: Y=10, 285/292

In case of 20VM40/20VS40

- High beam: Y=200, 286/297
- Low beam: Y=10, 283/293

- 5) After each adjustment is finished, Press [MUTING], [ENTER] to finishing adjustment.

* If you don't have any optical measurement equipment, Set white balance manually using step 3.

3-6. Sub-Bright adjustment

- 1) Receive monoscope pattern for bright adjustment.
- 2) Set to service mode and select SBR in service mode Using [1], [4] buttons.
- 3) Adjust screen's sub-bright to following. Using [3], [6] buttons.
In case of 13VM40/13VM41
- 20% Cut off
In case of 20VM40/20VS40
- 10% Cut off
- 4) After finished, Press [MUTING], [ENTER] to finishing adjustment.

* Refer to section 5-1 to get service method.

SECTION 4

SAFETY RELATED ADJUSTMENT

4-1. CIRCUIT CHECK FOR SAFETY

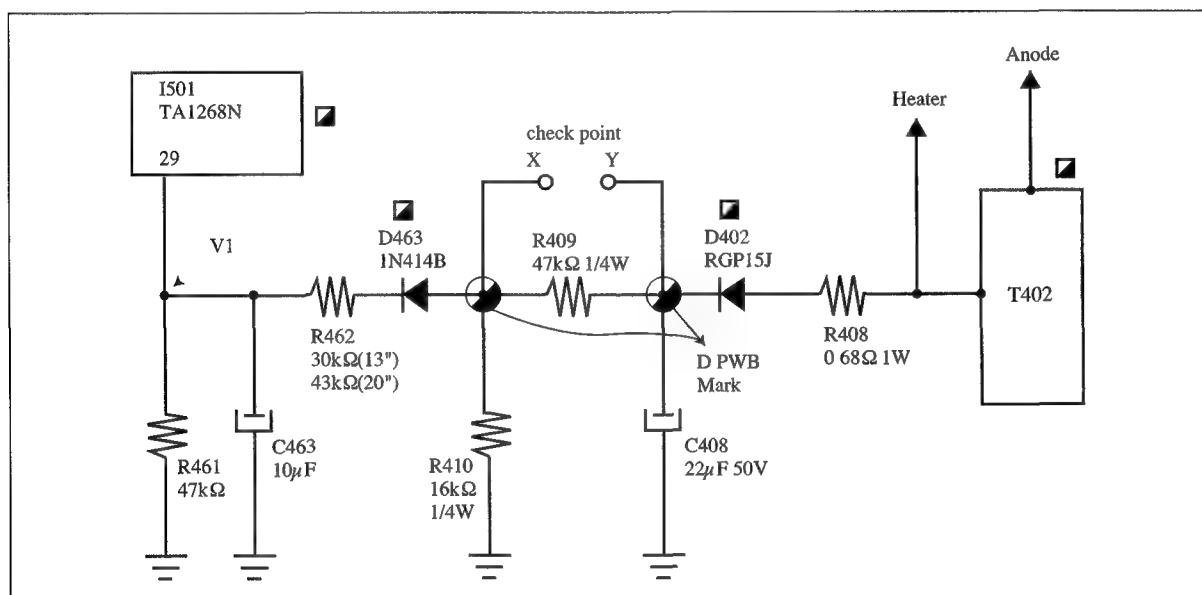
- 1) Input the color bar signal.
- 2) Connect a 1/2W, 470K Ω resistor between Q803-B of D board and GND.
- 3) As soon as connecting the external resistor, the receiver stops operating (Power: relay off) And removing the external resistor, the receiver operates normally when plug the AC POWER CORD after plugging it out.

4-2. VERTICAL SHORT CIRCUIT CHECK

- 1) Input the color bar signal.
- 2) Short both terminals of C306 from outside.
- 3) As soon as shorting, the receiver stops operating.
And removing the external short, the receiver operates normally.

4-3. HOLD-DOWN CHECK

- 1) This procedure should always be performed when replacing the following components (marked with ☒ on the schematic diagram);
I501, T402, DY, D402.



2) Circuit operating explanation

This circuit is designed to protect the X-Ray Radiation by means of detecting the high voltage.

If the High Voltage(H V.) from the anode terminal in F.B.T.(T402) is increased to the worst value due to the failure of unreliable components and mis-adjustment of user and service control, the output voltage from the Heater Pin of F.B.T. is increased at the same time

The output voltage from Heater Pin of F.B.T. is rectified by D402 and filtered by C408 and the DC voltage is divided by R409 and R410. At normal operation condition, the voltage V1 in pin 29 of I501 is lower than breakdown voltage of 3.5V.

If V1 is reached to the breakdown voltage, the horizontal output pin 32 in I501 becomes low state and the horizontal drive current can not flow to TR Q401. Then the horizontal drive pulse is not generated. Finally unit becomes shut down because the F.B.T. does not operated.

- 3) Check the X-Ray protection circuit.
 - a. Turn on the set and connect the color bar signal at the antenna terminal.
 - b. Check the B+ voltage whether it is correct or not.
 - c. If B+ is incorrect, power circuit is to be repaired.
 - d. To check the operation of hold down circuit, short points X and Y.
 - e. Identify the screen status whether raster is appeared or not.
 - f. If there is distorted synchronism of screen, the set is OK.
 - g. Remove the shorted jumper from points X and Y.
 - h. Judgement of X-Ray Radiation is determined by APPENDIX.

SECTION 5

CIRCUIT ADJUSTMENTS

5-1. ADJUSTMENTS WITH COMMANDER

Service adjustments are made with the RM-Y153/Y153W that comes with this unit.

Entering service mode

With the unit on standby

DISPLAY

5

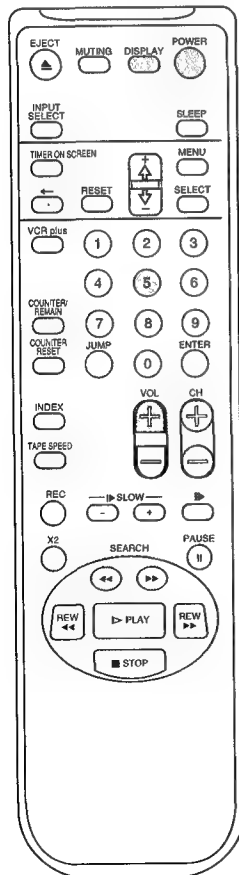
+

VOL UP

○

POWER

This operation sequence puts the unit into service mode.
Press above all buttons within 6 seconds
Continuous two buttons should be pressed within 3 seconds.



1, 4

Select the adjustment item

3, 6

Raise/lower the data value

MUTING

Writes. (then data value is changed WRITE and it's color becomes green.)

ENTER

Writing completed. (then it's color is changed red. → After 3 seconds, it's color is changed green.)

0, ENTER

The current item's data is changed the last memorized data

The screen display is

Item number

00

SERVICE

VSZ

31

Mode

Adjustment
Item

Data & State

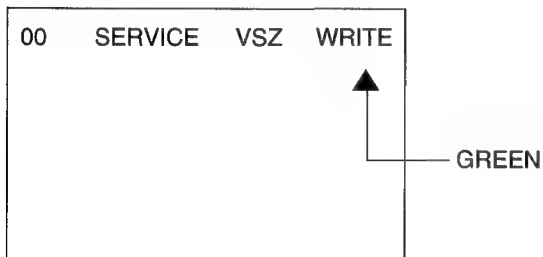
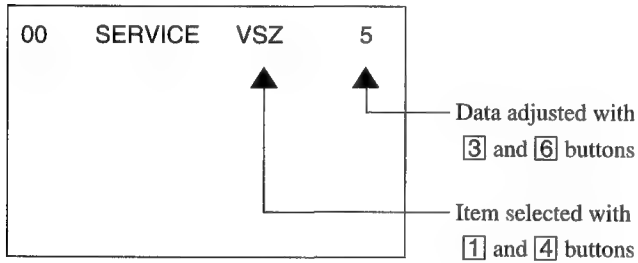
5-2. ADJUSTMENT METHOD

Item Number 00

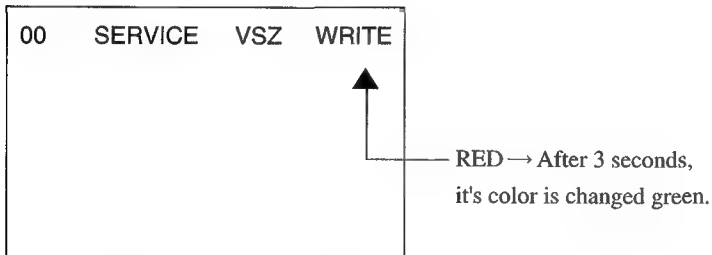
This explanation uses V-position as an example

- 1) Select 00 VSZ with the [1] and [4] buttons.
- 2) Raise/lower the data with the [3] and [6] buttons.
- 3) Select the optimum state.
- 4) Write with the [MUTING] button. (The display changes to WRITE)
- 5) Execute the writing with the [ENTER] button.
(The WRITE's color is changed to red)

Use the same method for Items Number 00-18 Use [1] and [4] to select the adjustments item, Use [3] and [6] to adjust, write with [MUTING], then execute the write with [ENTER].



Written with [MUTING]



Write executed [ENTER]

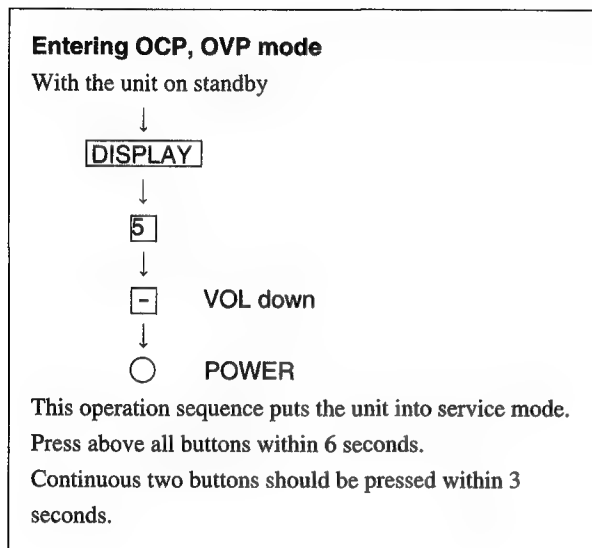
Adjustment Item table

Item number	Adjustment Item	Data range	Standard Values	Resister Name	Device
0	VSZ	0-63	3	V size	IC701
1	VPO	0-7	3	V position	
2	HPO	0-31	31	H position	
3	ROF	0-255	127	R-Bias	
4	GOF	0-255	127	G-Bias	
5	BOF	0-255	127	B-Bias	
6	GDR	0-255	127	G-Drive	
7	BDR	0-255	127	B-Drive	
8	AGC	0-63	31	AGC control	
9	CON	0-63	31	Sub Contrast	
10	SBR	0-63	31	Sub Bright	
11	COL	0-63	31	Color	
12	TIN	0-63	31	Tint	
13	SHP	0-63	31	Sharpness	
14	VCO	0-1	0	VCO Adjustment 0 : off 0 : on	
15	SCN	0-2	0	SCREEN Adjustment 0 : SCREEN MUTE off 1 : Horizontal Line on	
16	ATK	0-3	0	Auto tracking Adjustment 0 : Auto Tracking off (center) 1 : Auto Tracking off (max) 2 : Auto Tracking off (min)	
17	APG	0-1	0	Auto PG adjustment 0 : Auto PG off 1 : Auto PG on	
18	SNS	0-1	0	0 : VCR Service off 1 : VCR Service on	

5-3. CHECK OCP AND OVP STATUS

This chassis can count automatically the sum of OCP and OVP occurrence.

If you want to reset the sum of OCP, OVP occurrence to zero, read following method.

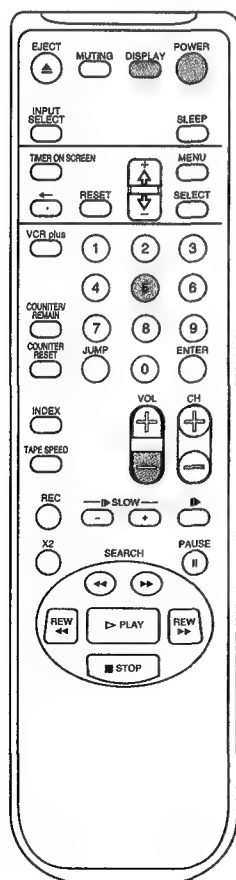


Once you entered the OCP,OVP mode, following screen will be showed up.

SELF	CHECK
OCP	12
OVP	8

To reset the sum of OCP, OVP occurrence to zero, press **[8]** button.
Then the sum digit will be changed to zero.

(The digit's color is changed red. --> After 3 seconds, it's color is changed green)



5-4. V CENTER adjustment

- 1) Set to service mode and select 01 VPO in service mode using **[1]**, **[4]** buttons
- 2) Press **[0]** and **[ENTER]** to copy last memorized data from eeprom
- 3) If adjustment is not good, adjust using **[3]**, **[6]** buttons



Use lever switch (SW301) on the D board and repeat if adjustment is difficult (Be sure not to use usually)

- 4) Press **[MUTING]**, **[ENTER]** to finishing adjustment

5-5. H CENTER adjustment

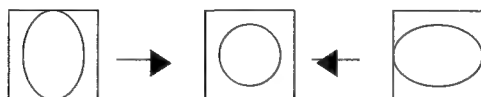
- 1) Set to service mode and select 02 HPO in service mode using **[1]**, **[4]** buttons
- 2) Press **[0]** and **[ENTER]** to copy last memorized data from eeprom.
- 3) If adjustment is not good, adjust using **[3]**, **[6]** buttons



- 4) Press **[MUTING]**, **[ENTER]** to finishing adjustment

5-6. V SIZE adjustment

- 1) Set to service mode and select 00 VSZ in service mode using **[1]**, **[4]** buttons
- 2) Press **[0]** and **[ENTER]** to copy last memorized data from eeprom
- 3) If adjustment is not good, adjust using **[3]**, **[6]** buttons



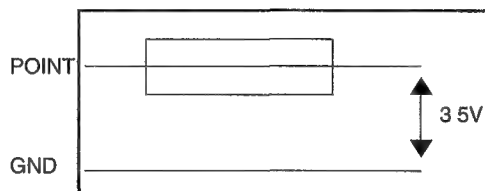
- 4) Press **[MUTING]**, **[ENTER]** to finishing adjustment.

5-7. VCO adjustment

- 1) Receive RF 3CH split color bar signal.
- 2) Set to service mode and select 13 VCO in service mode using **[1]**, **[4]** buttons.
- 3) Press **[3]** or **[6]** to set VCO.
(Then, VCO OK is appeared on the 2nd line of screen.)

5-8. Sound Detection Adjustment

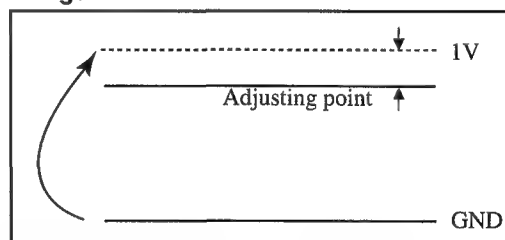
- 1) Receive special signal from RF.
(1KHz, 100% Modulation, MONO)
- 2) Connect oscilloscope (CH-1) to pin54 of I501 on MA board.
Probe : 10X
Voltage range : 50mV/Div
- 3) Turn the L103 (SIF coil) to set 3.5V - DC.



5-9. RF-AGC Adjustment

- 1) Receive color bar signal from RF
(Input Level : 60dBuV)
- 2) Connect oscilloscope (CH-1) to P101 on MA board
Probe : 10X
Voltage range : 100mV/Div
- 3) Set to service mode and select 08 AGC in service mode using **[1]**, **[4]** buttons.
- 4) Press **[0]** and **[ENTER]** to copy last memorized data from eeprom
- 5) Press **[3]**, **[6]** buttons until the signal is located below 1V from Peak voltage.

Peak Voltage



If adjustment is not good, adjust using **[3]**, **[6]** buttons

- 7) Press **[MUTING]**, **[ENTER]** to save the adjustment data

SECTION 6

VCR DECK ADJUSTMENTS

This adjustment must be operated after the assembling is finished as Chassis ass'y.

6-1. Setup and Adjustment locations

1) Necessary Instruments

TAPE for exclusive use of SP.

Oscilloscope

10 : 1 Probe 2EA

Particular Driver for adjustment

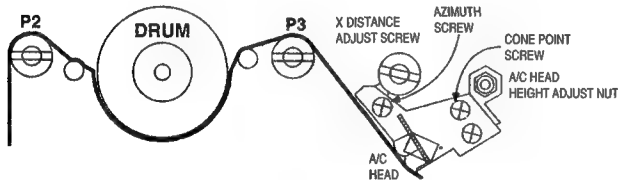
(P2, P3, X-distance control, Audio (NUT) control)

RMS Meter (Audio Level Meter)

2) Preliminary Steps

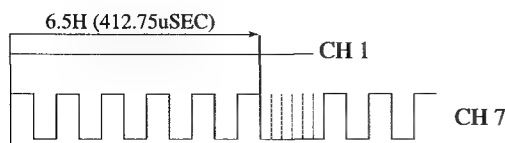
PY07 description (Use JIG ASSY of Next Page.)

Pin 1 : video out
Pin 2 : GND
Pin 3 : audio-L
Pin 4 : audio-R
Pin 5 : GND
Pin 6 : video H/SW
Pin 7 : Playback RF



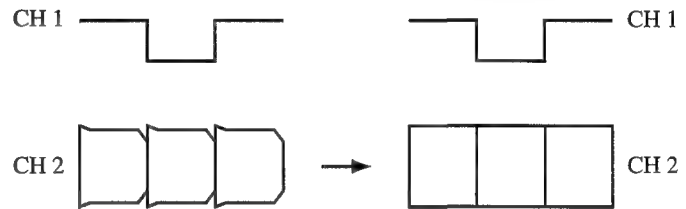
6-3. P.G adjustment

- 1) Connect oscilloscope (CH-1) to pin 6 of PY07 and CH-2 to pin 1 of PY07 on MA board. When adjusting, Use CH-2 waveform. (for Trigger of CH-1)
- 2) PLAY by insert TAPE for exclusive use of SP (DN-2, 7KHz).
- 3) As soon as the AUTO TRACKING is disappeared after play, set to service mode and select APG using [1], [4] buttons.
- 4) Press [1] or [4] button one time.
- 5) Check the PG timing is good or not.
Spec : 6.5H \pm 0.5H



6-2. X-distance & P2, P3 adjustment

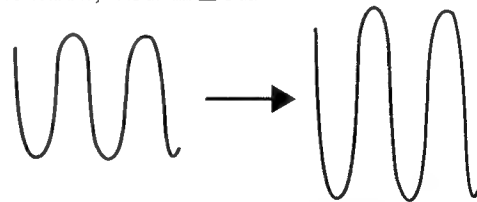
- 1) Connect oscilloscope (CH-1) to pin 6 of PY07 and CH-2 to pin 7 of PY07 on MA board. When adjusting, Use CH-2 waveform. (for Trigger of CH-1)
- 2) PLAY by insert TAPE for exclusive use of SP (DN-2, 7KHz).
- 3) As soon as the AUTO TRACKING is disappeared after play, set to service mode and select ATK using [1] and [4] buttons. (Then, The data becomes [1] and ATK OFF appears on the screen. It means AUTO TRACKING OFF).
- 4) Set the data to 1 (MIN) using [3], [6] buttons.
Adjust P2 and P3 so that the waveform is maximum and stabilized with viewing RF ENVELOPE waveform of scope
- 5) Set the data to 2 (MAX) using [3], [6] buttons
Adjust P2 and P3 so that the waveform is maximum and stabilized with viewing RF ENVELOPE waveform of scope.



- 6) Set the data to 0 (OFF) using [3], [6] buttons.
- 7) Adjust Cone Screw (within ± 30 degrees) of the DECK so that the RF waveform becomes maximum
- 8) Confirm that the RF waveform is fully flat.
Set the data to 3 (ATK On) using [3], [6] buttons.

6-4. Audio Azimuth adjustment

- 1) Connect oscilloscope (CH-1) to pin 3 of PY07 on MA board.
- 2) PLAY by inserting TAPE for exclusive use of SP (DN-2, 7KHz)
- 3) As soon as the AUTO TRACKING is disappeared after playing, Turn the azimuth screw to obtain maximum level.
SPEC : 7KHz, -7.5dBm \pm 3dB



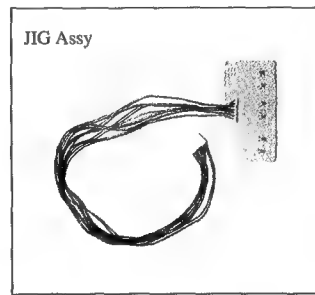
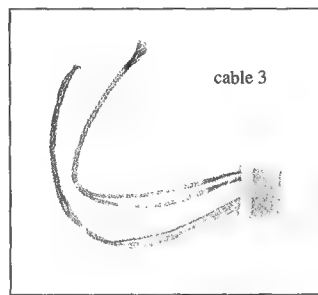
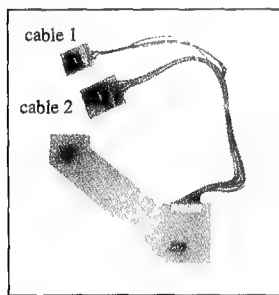
6-5. Test Tape for VCR Adjustments

SPEC	P/N	DESCRIPTION
TAPE TEST(NTSC)	9-882-769-01	VNC-1(SP COLOR BAR, 1KHz)
TAPE TEST(NTSC)	9-882-770-01	DN-2(SP, STAIRSTEP, 7KHz)

6-6. VCR SERVICE JIG CONNECTION METHOD

FIXTURE ITEM	P/N	DESCRIPTION
Extension Cable 1	9-882-765-01	Use for K mecha Drum Motor Connection Cable
Extension Cable 2	9-882-766-01	Use for K mecha Capstan Motor Connection Cable
Extension Cable 3	9-882-767-01	Use for K mecha A/C head and L/C Motor Connection Cable
JIG Assy	9-882-768-01	CN-141 (Test Pin Array)

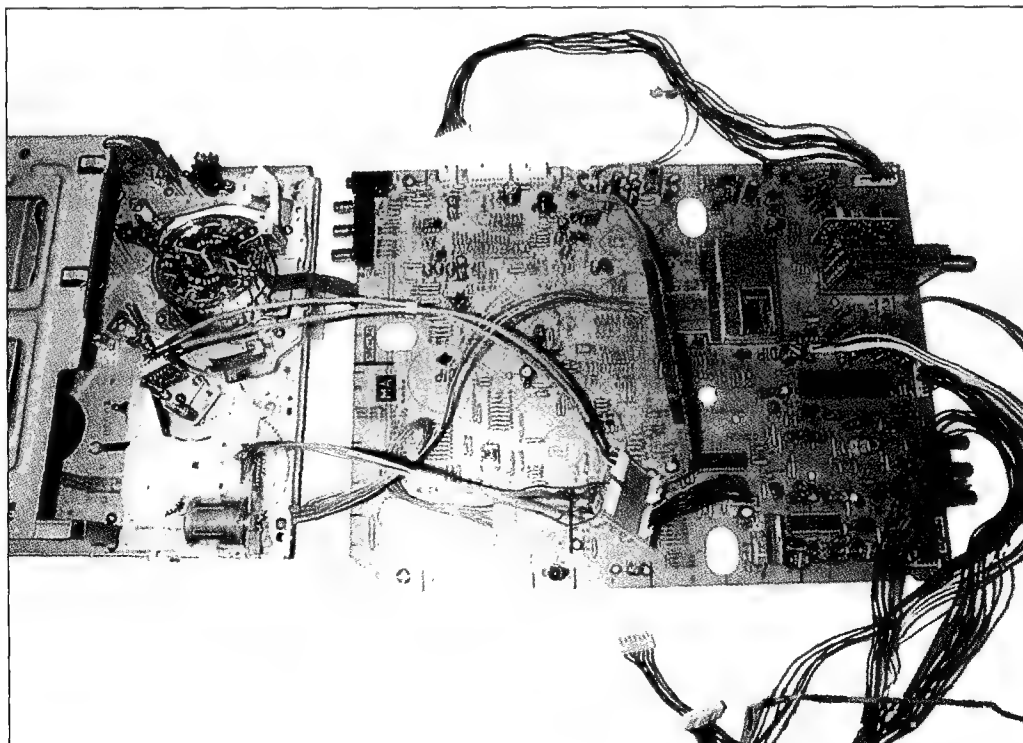
Drawings



Connection Method

When service man wants to check VCR area, especially SERVO and SYSCON, you have to use above connectors for solving VCR errors easily.

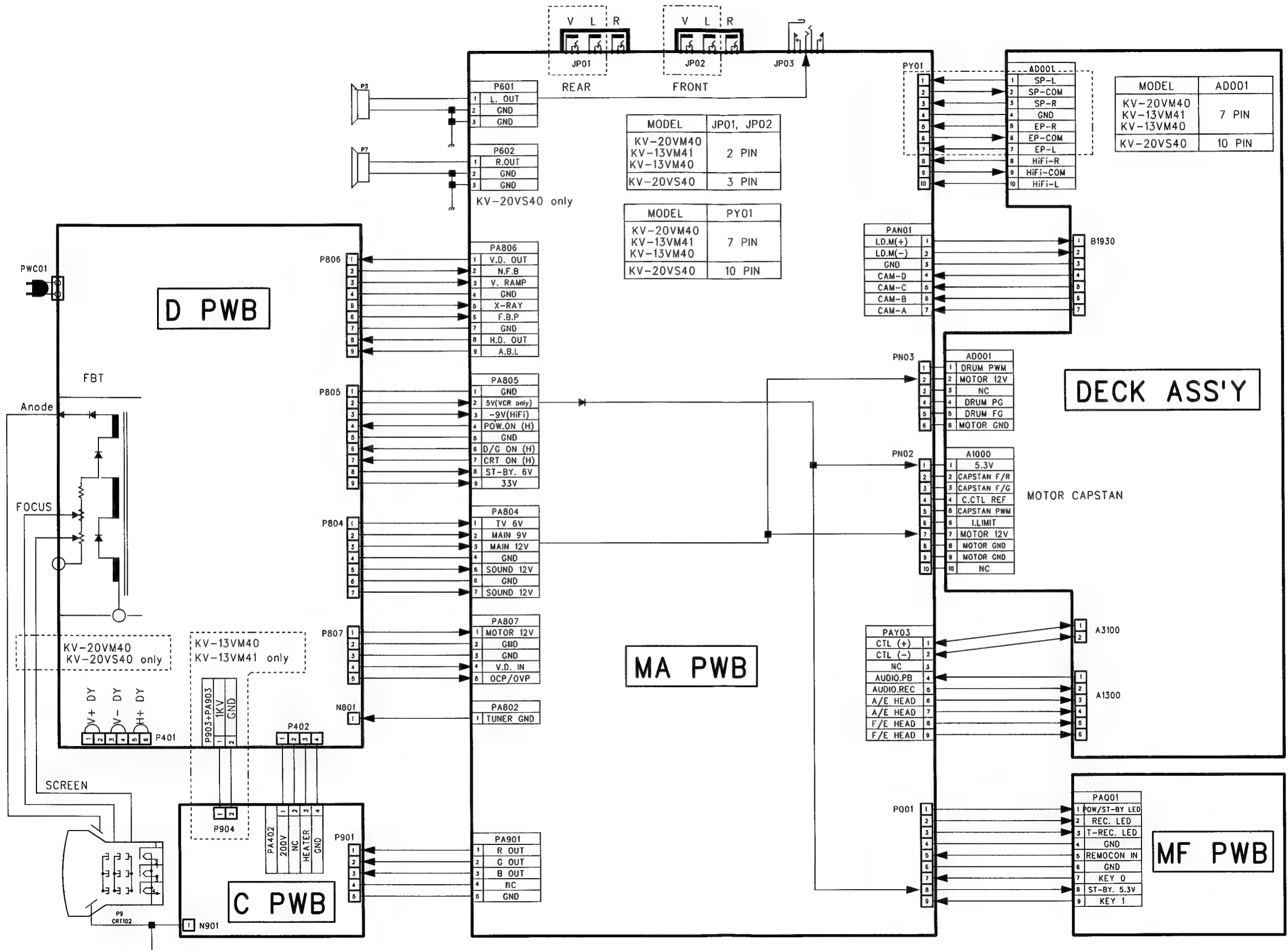
Before Connecting, Enter Service Mode No 18. SNS Once you enter No 18. SNS. All Sensor operation will be ignored. But All basic operation (Play, Que, Review, Still, Rec) can be checked



SECTION 7

DIAGRAMS

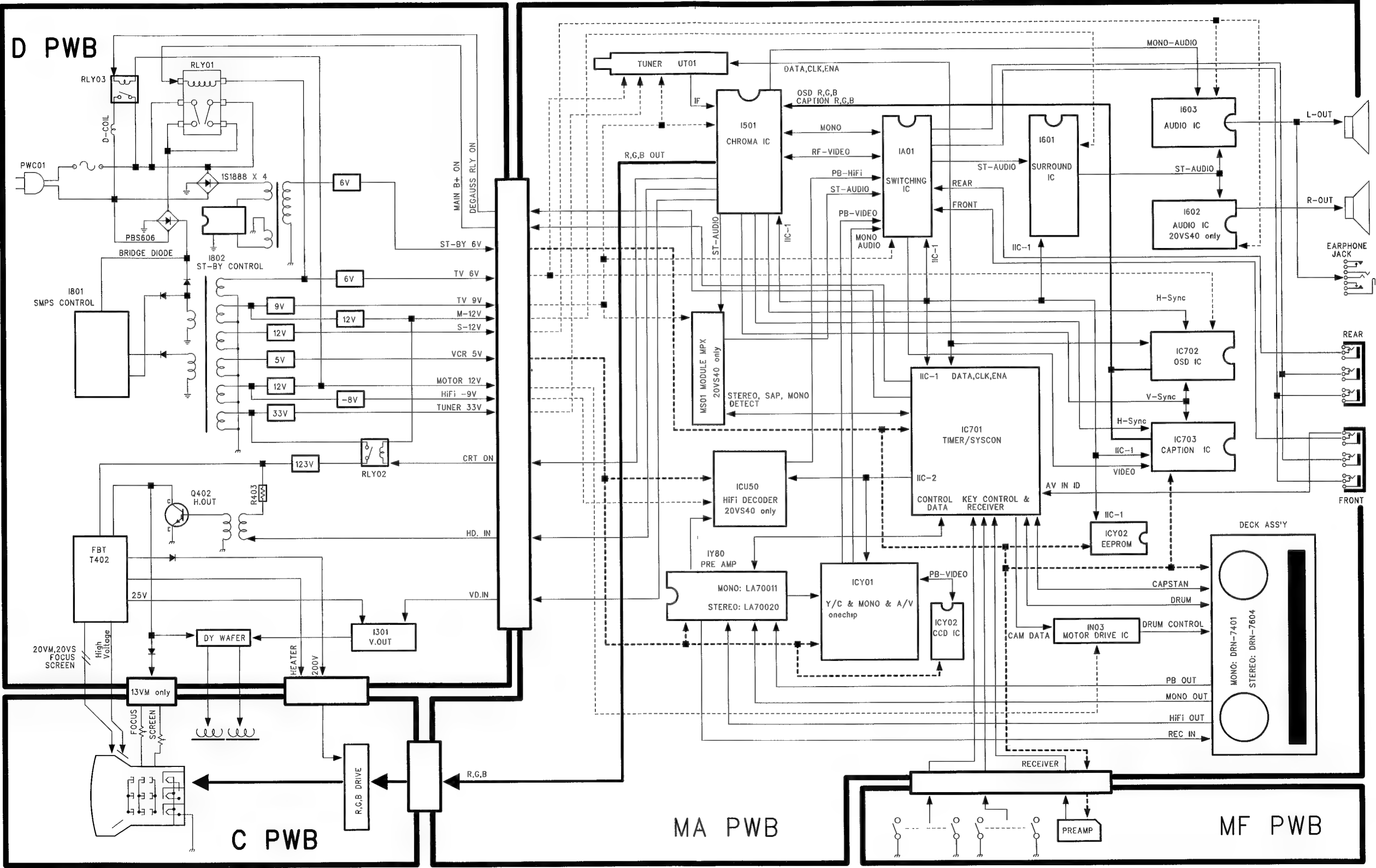
7-1. CONNECTION DIAGRAM



7-2. BLOCK DIAGRAM

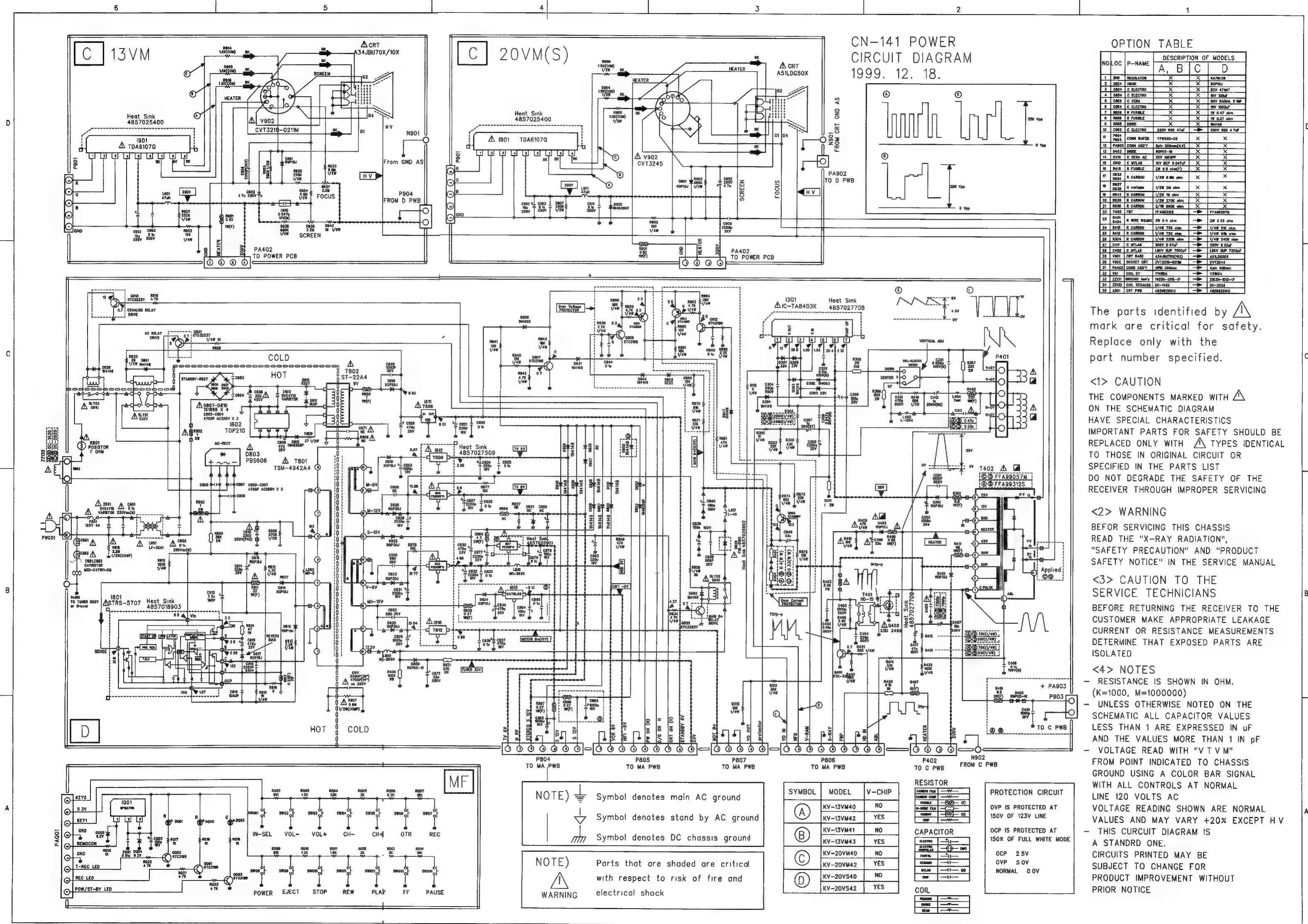
'STEREO' & 'HiFi' logic can be used only for KV-20VS40.

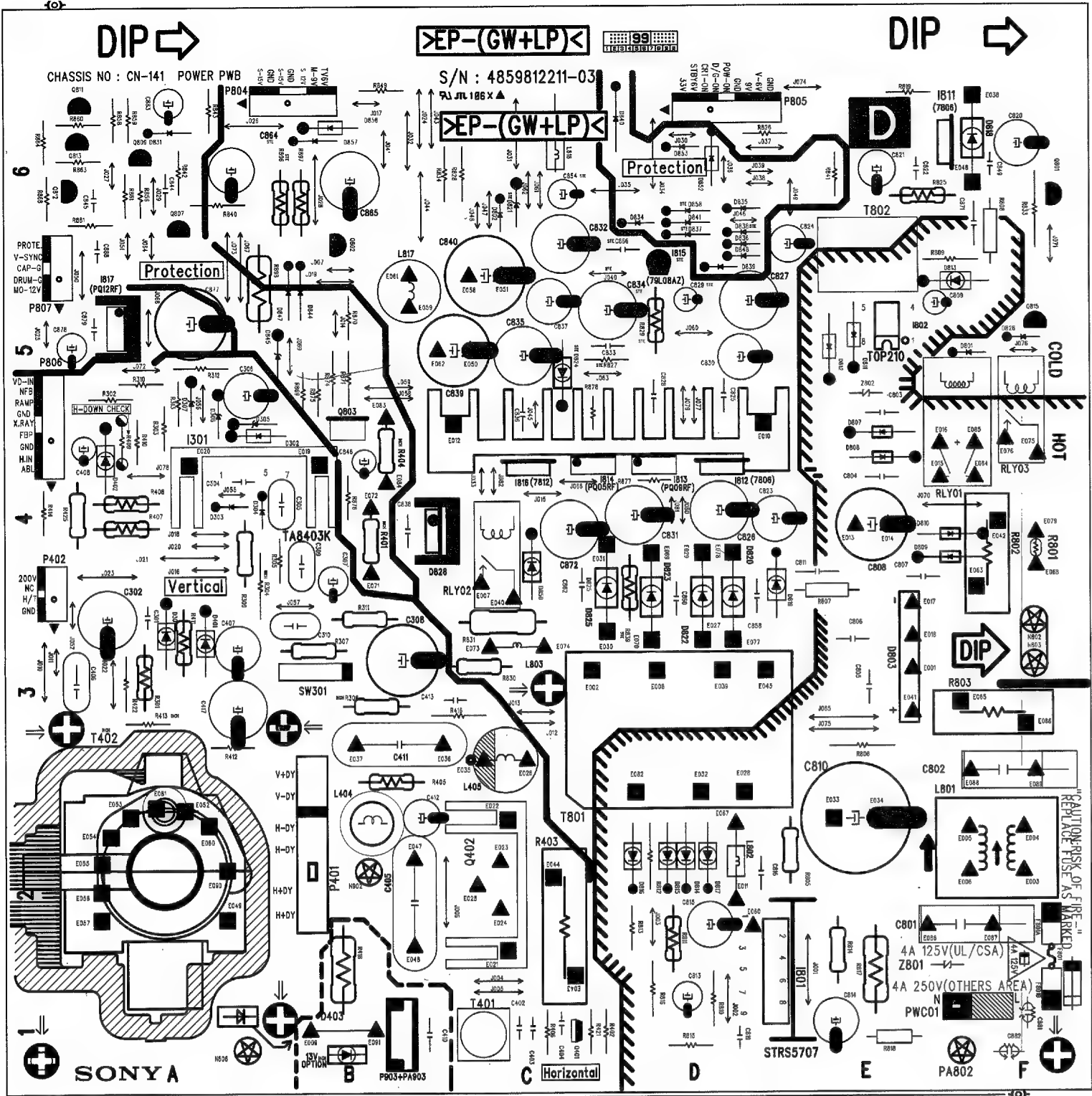
25. AUGUST



7-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

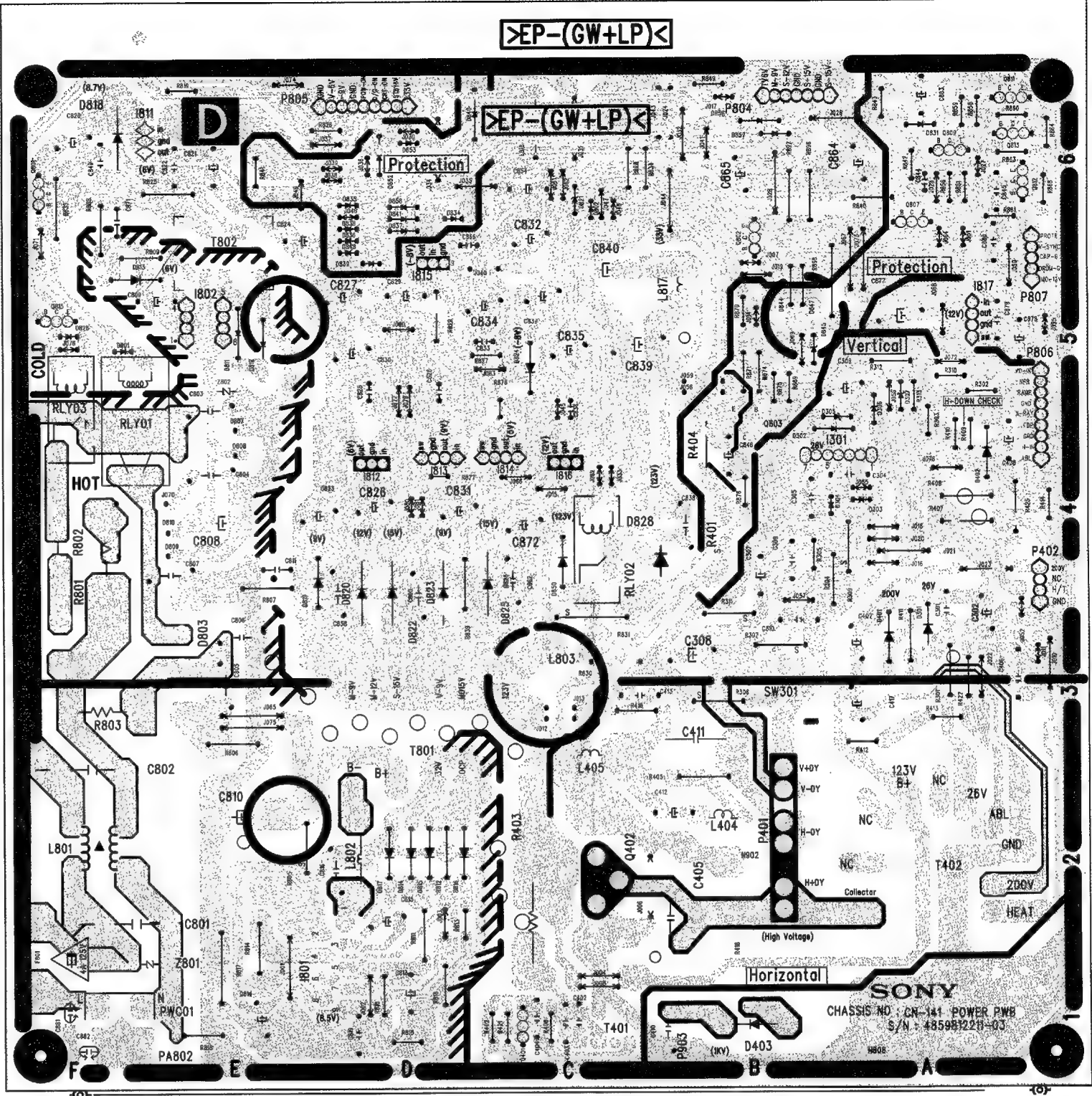
1) SCHEMATIC DIAGRAM OF C & D BOARD





CN141P 5580229 98/8/11 YOUNGIL

<Component Side>

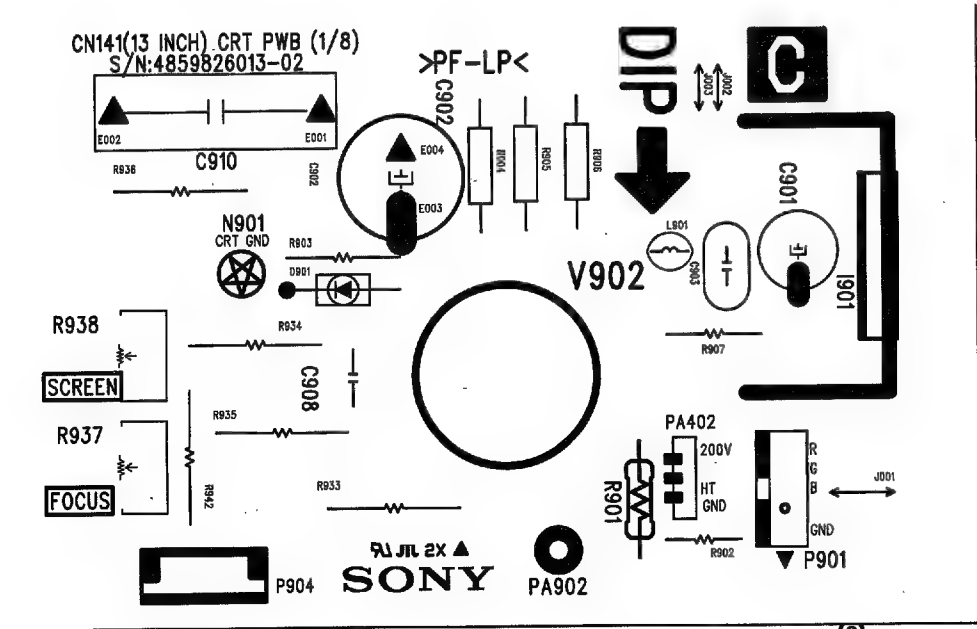


CN141P 55T0126 98/8/11 YOUNGIL

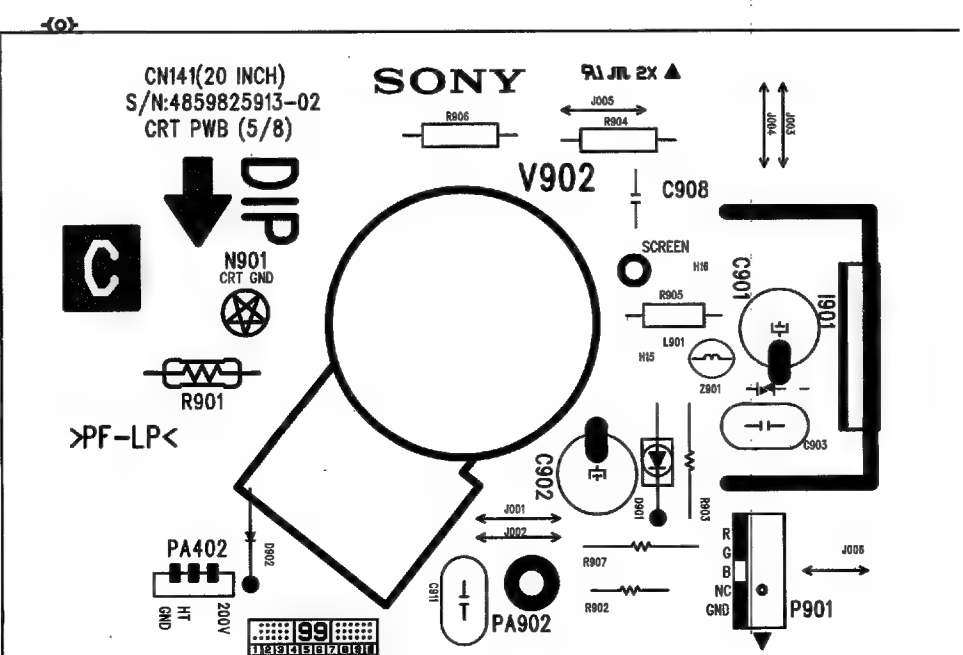
<Conductor Side>

SEMICONDUCTOR LOCATION
D BOARD

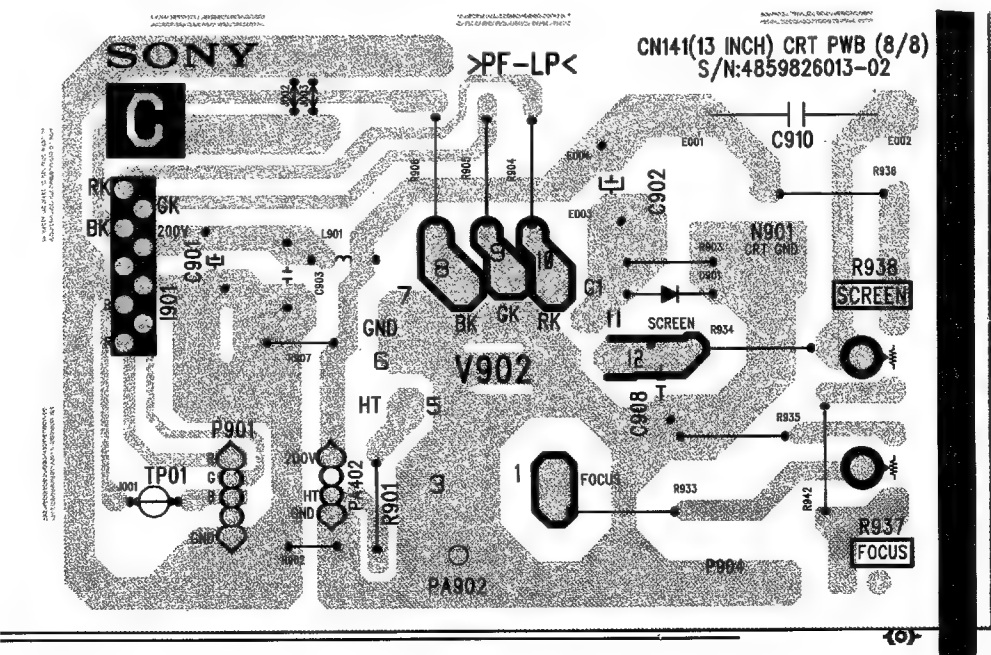
DIODE			
Component Side		Component Side	
D301	A-3	D839	D-5
D302	A-4	D840	C-6
D303	A-4	D841	C-6
D304	A-4	D844	B-5
D305	A-4	D845	A-5
D306	A-4	D847	A-5
D307	A-4	D848	D-6
D401	A-3	D850	C-4
D402	A-4	D852	D-6
D403	B-1	D853	D-6
D801	F-5	D855	B-6
D802	C-6	D857	B-6
D803	E-3	D858	C-6
D807	E-4		
D808	E-4		
IC			
		Component Side	
D809	E-4	I301	E-5
D810	E-4	I801	E-1
D811	E-5	I802	E-5
D812	E-5	I811	F-6
D813	F-5	I812	D-4
D814	D-2	I813	D-4
D815	D-2	I814	C-4
D816	D-2	I815	D-5
D817	D-2	I816	C-4
D818	F-5	I817	A-5
D819	D-4		
D820	C-6		
D821	C-6		
D822	D-4		
D823	D-4		
TRANSISTOR			
		Component Side	
D824	C-6	Q401	C-1
D825	C-4	Q402	C-2
D826	F-5	Q801	F-6
D828	B-4	Q802	B-6
D831	A-5	Q803	B-5
D834	D-5		
D835	D-5		
D836	D-6		
D837	D-6		
D838	D-6		
		Q809	A-6
		Q811	A-6
		Q812	A-6
		Q813	A-6
		Q815	A-6



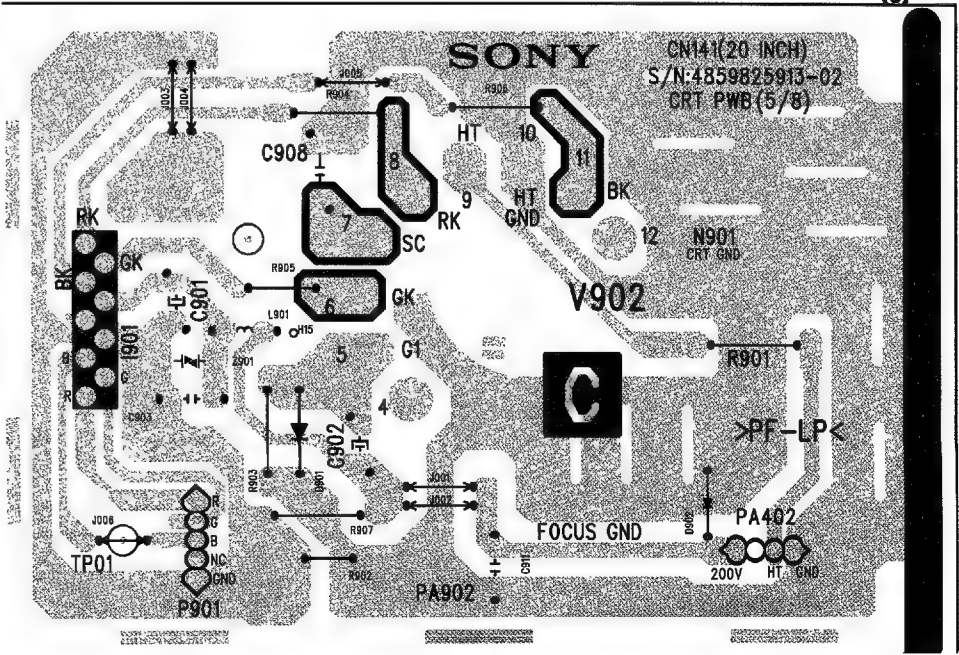
<Component Side>



<Component Side>

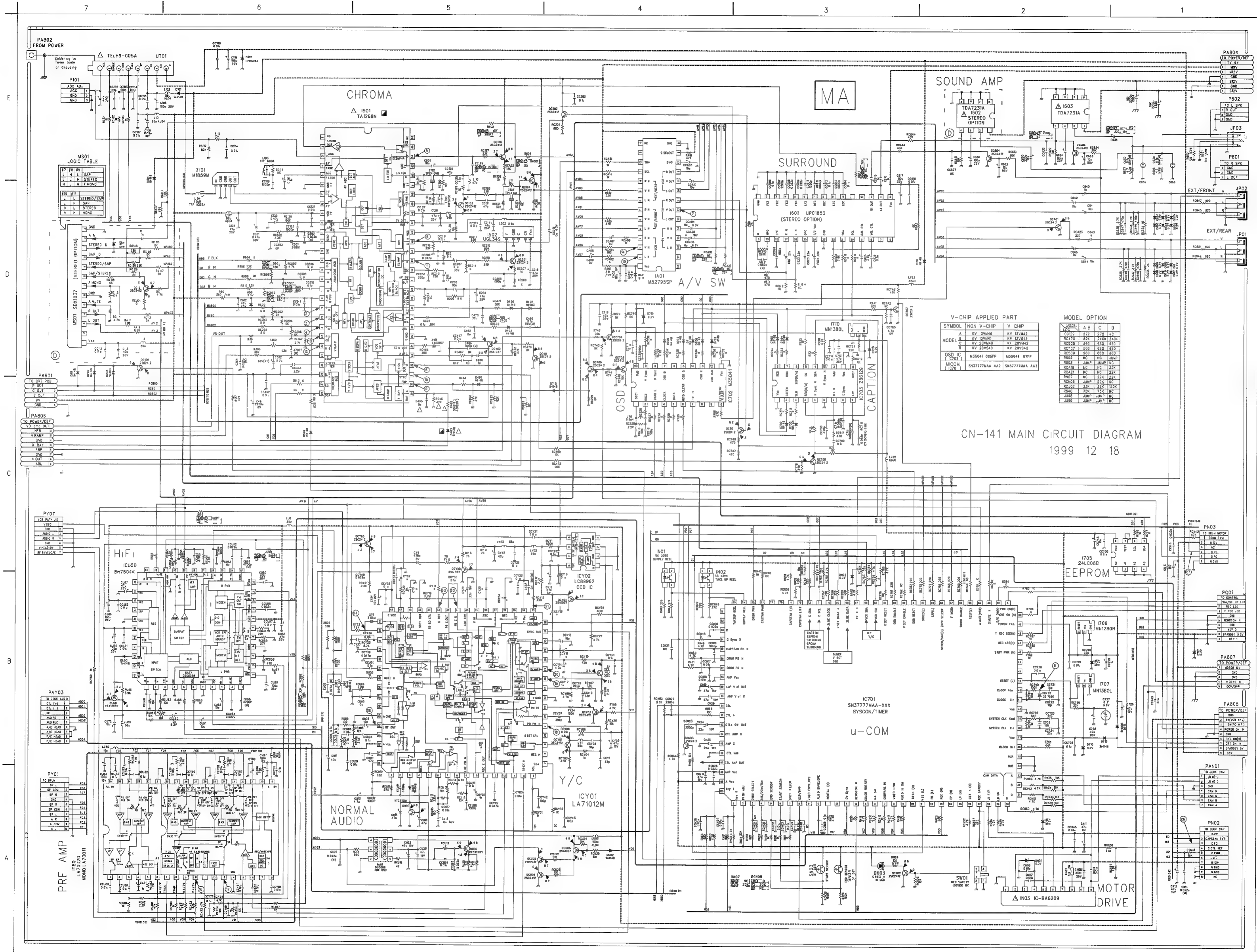


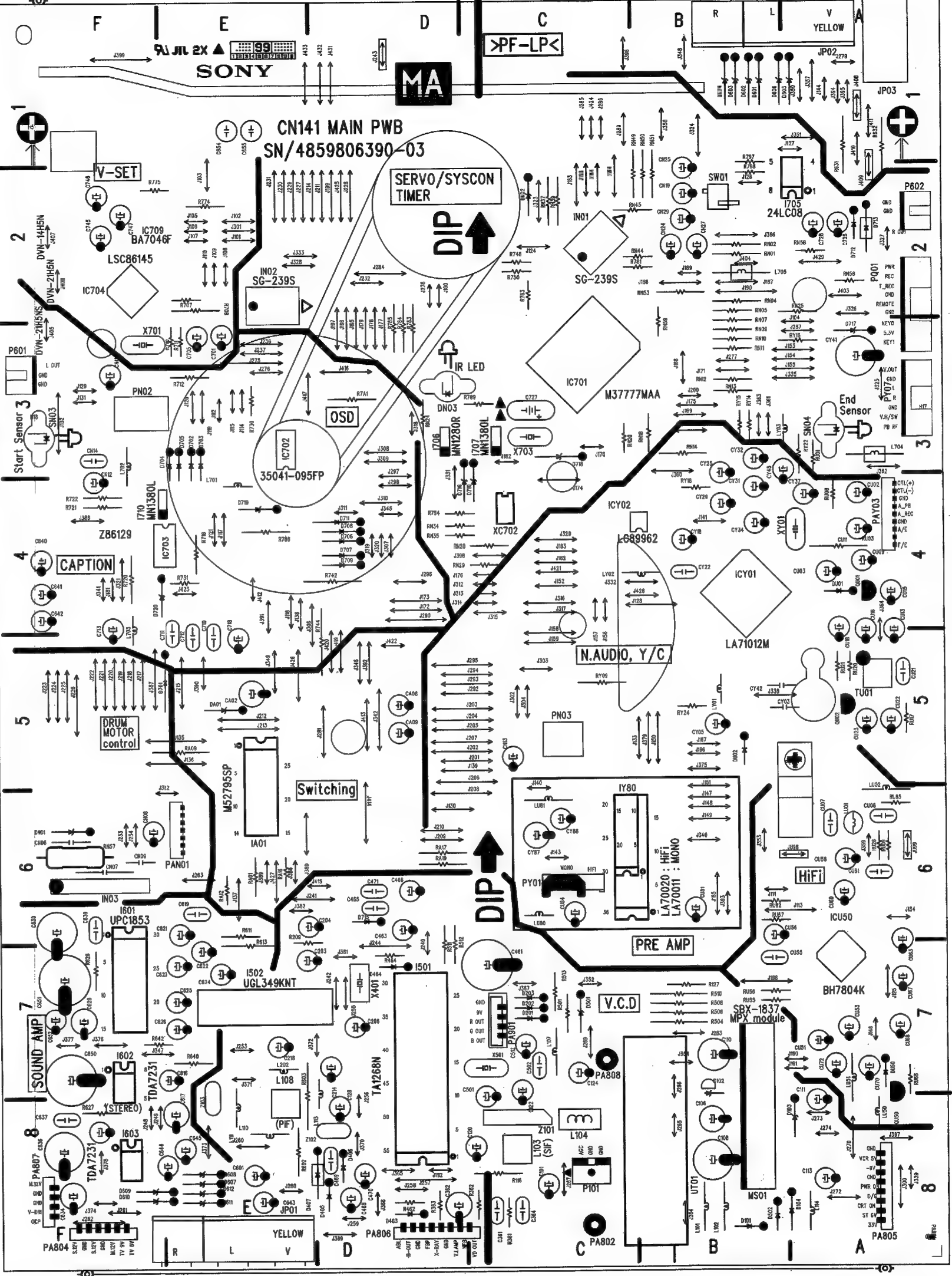
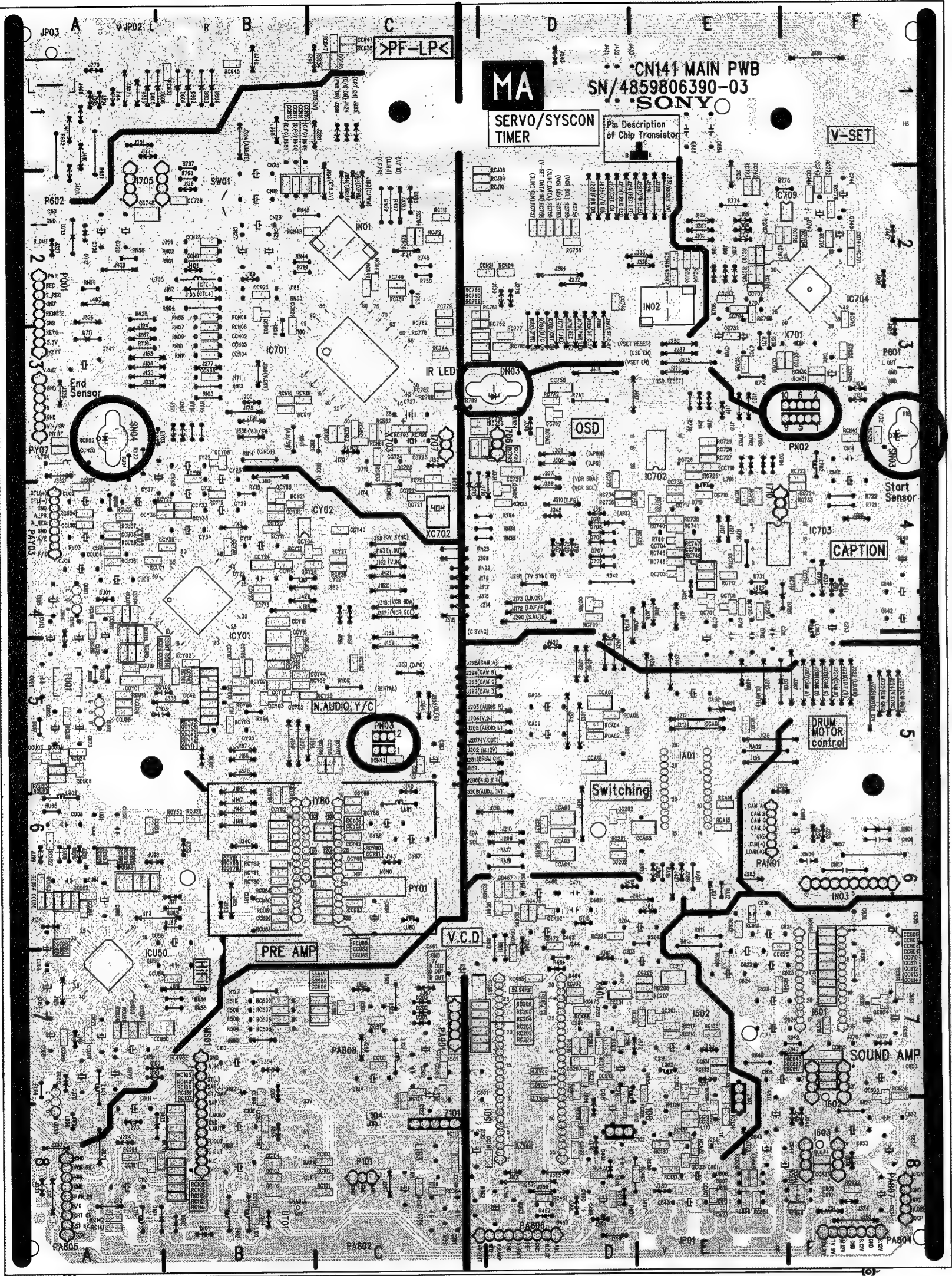
<Conductor Side>



<Conductor Side>

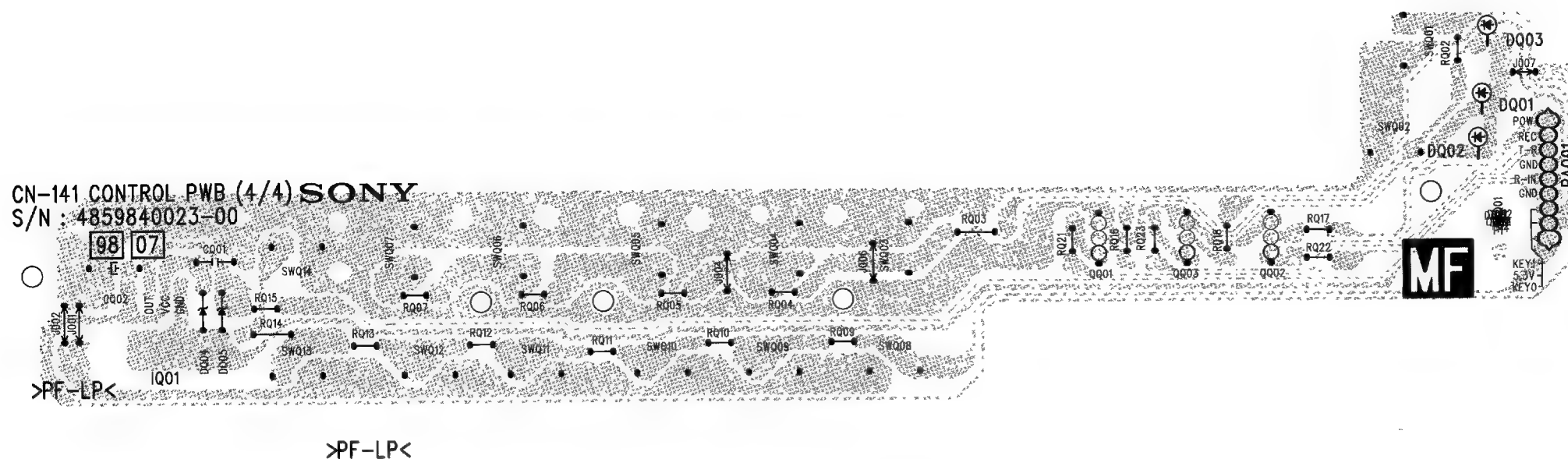
3) SCHEMATIC DIAGRAM OF MA BOARD





SEMICONDUCTOR LOCATION
MA BOARD

DIODE				TRANSISTOR	
	Component Side	Component Side	Conductor Side	Component Side	Conductor Side
D101	B-8	DAQ1	E-5	QC481	D-6
D102	B-7	DN01	F-6	QC482	D-8
D103	A-8	DN02	C-2	QC804	F-7
D104	A-8	DN03	D-3	QC805	F-7
D201	C-7	DU01	A-4	QC701	E-4
D202	C-7	DU02	B-5	QC703	E-4
D203	C-7	DU80	A-7	QC704	E-4
D405	D-8	IC		QC705	D-4
D406	D-8			QC706	E-4
D407	D-8			QC707	D-3
D463	D-8			QCA01	E-8
D484	D-7			QCN02	D-4
D501	C-7	IS01	D-8	QCN03	B-2
D502	B-8	IS02	E-7	QCJ03	A-6
D601	B-1	IS01	F-7	QCU04	A-6
D602	B-1	IS02	F-7	QCJ05	A-6
D603	B-1	IS03	F-8	QCY01	B-5
D604	B-1	1705	A-2	QCY02	B-5
D605	B-1	1706	D-3	QCY03	B-5
D606	A-1	1707	C-5	QCY04	B-4
D607	E-8	1708	B-6	QCY05	B-3
D608	E-8	1710	F-4	QCY06	B-4
D609	F-8	IA01	E-5	QDU1	A-4
D610	F-8	IC701	C-3	QDU2	A-5
D811	E-8	IC702	E-3	QDU50	A-7
D612	E-8	IC703	E-4		
D701	E-5	IC704	F-2	SENSOR	
D702	E-4	IC709	F-2		
D703	E-4	ICU50	A-7	Component Side	Conductor Side
D704	E-4	ICY01	B-4	SN03	F-3
D705	E-4	ICY02	C-4	SN04	A-3
D706	D-4	IN01	C-2	CRYSTAL	
D707	D-4	IN02	E-2		
D708	D-4	IN03	F-6	Component Side	Conductor Side
D709	D-4	1Y80	B-6	X401	D-7
D710	C-4	TRANSISTOR		X501	C-3
D711	D-4			X701	C-4
D712	A-2	QC101	A-8	XC702	A-4
D713	A-2	QC102	C-7	XY01	
D716	D-7	QC103	E-7		
D716	D-4	QC104	E-8		
D717	A-3	QC105	E-8		
D718	C-3	QC201	E-7		
D719	D-4	QC202	D-6		
D720	E-4				



6) WAVEFORMS AND VOLTAGES OF MA BOARD

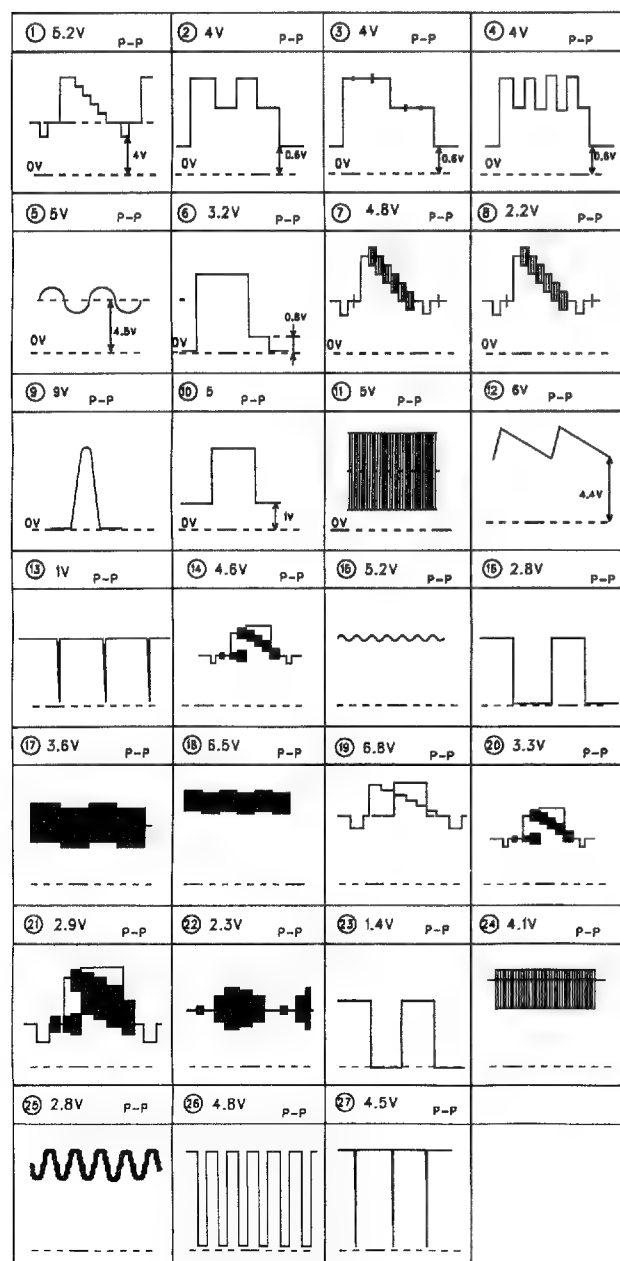
SCHEMATIC DIAGRAM for MA BOARD
CHASSIS : CN-141

NTSC-M only

WAVE FORMS

VIDEO : 6 STEP NTSC COLOR BAR

AUDIO : 1KHz SINE WAVE 70% FM



- * No.1 - No.13 : RF Mode
- * No.14 - No.27 : Playback Mode (DN-1 Tape)


MA BOARD VOLTAGE LIST

for RF FUNCTION						for VCR FUNCTION															
Ref.	Pin No.	Voltage[V]	Ref.	Pin No.	Voltage[V]	Ref.	Pin No.	PB mode Voltage[V]	RF mode Voltage[V]	Ref.	Pin No.	PB mode Voltage[V]	RF mode Voltage[V]	Ref.	Pin No.	PB mode Voltage[V]	RF mode Voltage[V]				
IS01	1	0		20	3.9	ICY01	1	2.3	2.4	IN03	1	0	0	ICU50 (STEREO)	1	0	0				
	2	3.9		21	3.9		2	0.2	0.7		2	0.5	0.5		2	0	0				
	3	4.2		22	3.7		3	0	4.9		3	0.9	0.9		3	0	0				
	4	3.3		23	3.9		4	0	0		4	-0.3	0.4		4	0	0				
	5	4.3		25	3.9		5	2.3	2.4		5	0	0		5	4.8	4.8				
	7	0		26	4.6		6	2.3	2.4		6	0	0		6	5	5				
	8	0.9		IC702	1		2.4	7	2.3		2.4	7	12		12	7	0	0			
	9	8.9			2		2.4	8	2.3		2.5	8	12		12	8	0.2	4.5			
	10	4.4			3		1.7	9	2.3		2.3	9	0.9		0.9	9	0	-0.7			
	11	6.1			4		3.8	10	2.3		2.5	10	0.5		0.5	10	-0.7	-0.7			
	12	4.7	5		4.3	11	0	2.7	IY80 LA7001I (MONO)	1	2	2	11	0.1	0.1						
	14	0	6		5.2	12	0	1.6		2	1.4	0.3	12	0	0						
	15	4.7	7		0	13	0	0.1		3	0	0	13	0	0						
	16	4.7	8		4.4	14	0	0.2		4	1.4	0	14	0	0.7						
	17	4.7	18		4.4	15	0	2		5	0.4	0.4	15	0	0						
	18	3.4	19		0.2	16	5	4.8		6	2.7	0.2	16	0	0						
	19	2.4	20	5.2	17	5	4.8	7		1.6	1.7	17	2.3	2.3							
	20	2.4	IC703	4	5	18	4.1	4.1		8	0	0	18	4.6	4.6						
	21	2.4		5	3.1	19	2.3	0		9	1	0.1	19	0	0						
	22	0.9		7	1.6	20	2.1	2.1		10	1.5	0.1	20	2.1	0						
	23	5.2		8	1.4	21	3	3.1	11	0	0.1	21	0	0							
	24	5.2		9	1.5	22	2.2	2.4	12	2.4	2.5	22	0	0							
	25	6.3		10	1	23	2.5	2.5	13	4.8	4.9	23	0	0							
	26	8.9		12	5.1	24	0	0	14	4.8	4.9	24	0	0							
	27	4.1		13	0	25	2.3	2.5	15	1.3		25	-4.6	-4.6							
	28	4.1		14	4	26	2.3	3.1	16	4.8	2	26	0	0							
	29	2.9		15	4	27	3.0	2.9	17	2	2	27	-4.1	0							
	30	2.0	17	0	28	2.7	2.6	18	0	0	28	0	0								
	31	1.4	18	0	29	2	1.9	19	2	2	29	0	0								
	32	1.3	I705	4	4.1	30	3.1	3	20	0	0	30	0	0							
	33	7.5		6	4.1	31	0.6	0.5	21	0.7	0.9	31	0	0							
	34	6.0		7	0	32	0	0.2	22	0.7	0.9	32	0	0							
	35	2.7		8	5.1	33	1.8	1.8	23	0		33	0	0							
	36	3.3		I706	1	0	34	4.8	4.9	24	0.7	0.9	34	0	0						
37	3.3	35			2.4	2.4	35	2.8	2.8												
38	3.0	36			4.1	4.1	36	4.8	4.8												
40	5.2	37			2.4	2.5	37	0	0												
42	4.7	38			2.2	2.3	38	0	0												
43	4.6	39			2.4	2.5	39	-4.6	-4.6												
44	2.5	40	1.8		1.6	40	0	0													
45	1.6	41	2		2	41	0	0													
46	8.9	42	2.4		2.4	42	-4.8	-4.8													
47	3.9	43	0.7		0	43	0	0													
48	8.9	44	2.4	2.6	44	0	0														
49	7.9	45	0	0	45	0	0														
50	7.8	46	4	4	46	0	0														
53	2.8	47	4	4	47	0	0														
54	4.3	48	4.8	4.9	48	0	0														
MS01	1	8.7	I602	1	12	49	3.7	3.9	49	4.8	4.8										
	3	4.4		2	5.8	50	2.3	2.4	50	4.8	4.8										
	4	4.4		3	0.5	51	0	2.2	51	0	0										
	5	0	4	0	52	1.9	1.9	52	0	0											
	7	0	I603	1	12	53	0	0	53	0	0										
	9	4.9		2	5.1	54	2.3	2.3	54	0	0										
	10	5.4		3	0.5	55	0	0	55	0	0										
	11	5.4	4	0	56	2.3	2.3	56	0	0											
	12	4.3				57	0	0.6	57	0	0.6										
	13	0				58	2.3	2.3	58	0	0										
IA01	1	8.9				59	0	0	59	0	0										
	2	4.6				60	2.3	2.4	60	2.3	2.4										
	3	3.9				61	0	2.3	61	0	2.3										
	4	4.6				62	4.8	4.9	62	4.8	4.9										
	5	4.6				63	2.3	2.4	63	2.3	2.4										
	6	3.5				64	2.3	2.4	64	2.3	2.4										
	7	4.6				ICYD2	1	2.2	2.2	1	0.7	0.7									
	8	4.6					2	0	0	2	0	0									
	9	3.5	3	1.3	1.3		3	0	1.9												
	10	4.6	4	0	0		4	0	1.9												
11	4.1	5	0.9	0.9	5		0	0													
12	4.1	6	2.5	2.5	6		2.1	1.9													
16	5.6	7	0	0	7		0	0													
17	4	8	4.8	4.8	8		4.8	4.8													
18	3.9																				
19	3.3																				

SAFETY CAUTION

BEFORE SERVICING THIS CHASSIS IT IS IMPERATIVE THAT THE SERVICE TECHNICIAN READ AND FOLLOW THE PRECAUTIONS AND INSTRUCTIONS SET FORTH IN THE "X-RAY RADIATION PRECAUTION," "SAFETY PRECAUTIONS," AND "PRODUCT SAFETY NOTICE" IN THE SERVICE MANUAL.



PRODUCT SAFETY

COMPONENTS MARKED WITH  ARE IMPERMANENTLY MARKED. THE SAFETY OF THE SET AND SHOULD BE MAINTAINED BY THE USER WITH TYPES IDENTICAL TO THOSE IN THE SERVICE MANUAL. SPECIFIED ONE IN THE PARTS LIST. DON'T DEGRADE THE SAFETY OF THE SET BY REPLACING WITH IMPROPER SERVICING.

RESISTOR

CARBON FILM	
CARBON COMP	
FUSIBLE	(F)
M-OXIDE FILM	
CEMENT	
CHIP	

COIL

PEAKING	
CHOKE	
BEAD	


CAPACITOR

ELECTRO	
ELECTRO NONPOLAR	(NP)
TANTAL	
CERAMIC	
MYLAR	
CHIP	

SAFETY CAUTION :

BEFORE SERVICING THIS CHASSIS IT IS IMPORTANT THAT THE SERVICE TECHNICIAN READ AND FOLLOW THE "X-RAY RADIATION PRECAUTION," "SAFETY PRECAUTIONS" AND "PRODUCT SAFETY NOTICE" IN THE SERVICE MANUAL

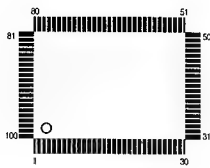
PRODUCT SAFETY NOTE :

COMPONENTS MARKED WITH  ARE IMPORTANT FOR MAINTAINING THE SAFETY OF THE SET AND SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ORIGINAL OR SPECIFIED ONE IN THE PARTS LIST.

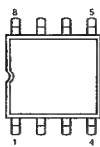
DON'T DEGRADE THE SAFETY OF THE SET THROUGH IMPROPER SERVICING.

7) SEMICONDOCTORS

M37777-XXX



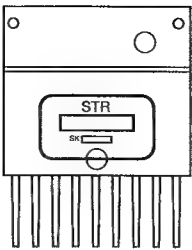
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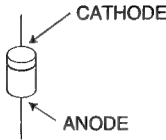
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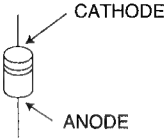
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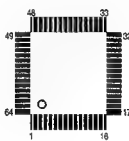
ISI888, R2KY
RGP02-18, RV1P
RGP30J
RGP15J



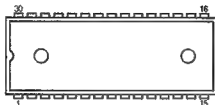
UZ-9.1BM
MTZ 6.2-B
UZ-3.3B
IN4148
UZ22BM
UZ33B



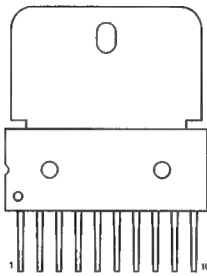
LA71012M



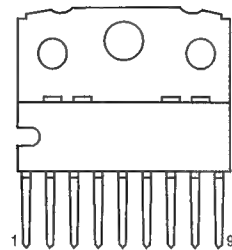
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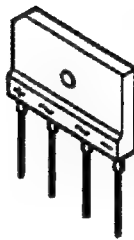
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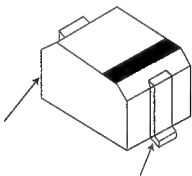
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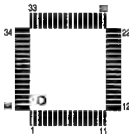
PBS606



16V 1MF
35V 0.1MF, 6.3V 10MF



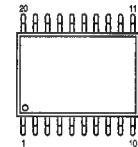
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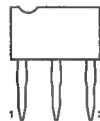
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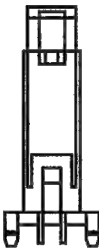
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MN1380L
MN1280R



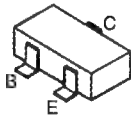
SG239



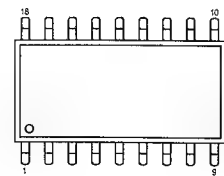
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2SA1037K
2SC2412K



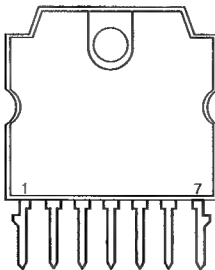
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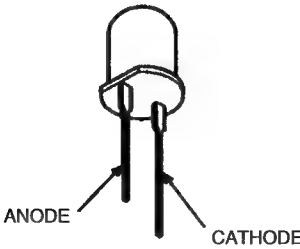
M52795SP



TA8403K



SLR-34VR3
SI5312-H



KIA7812P1
KIA7806P1



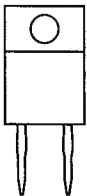
KTC3207
KTA1266Y, KTC3203Y
KTC3198Y



TOP210
24LC08B
TDA7231




FML-G16S



SECTION 8
EXPLODED VIEWS

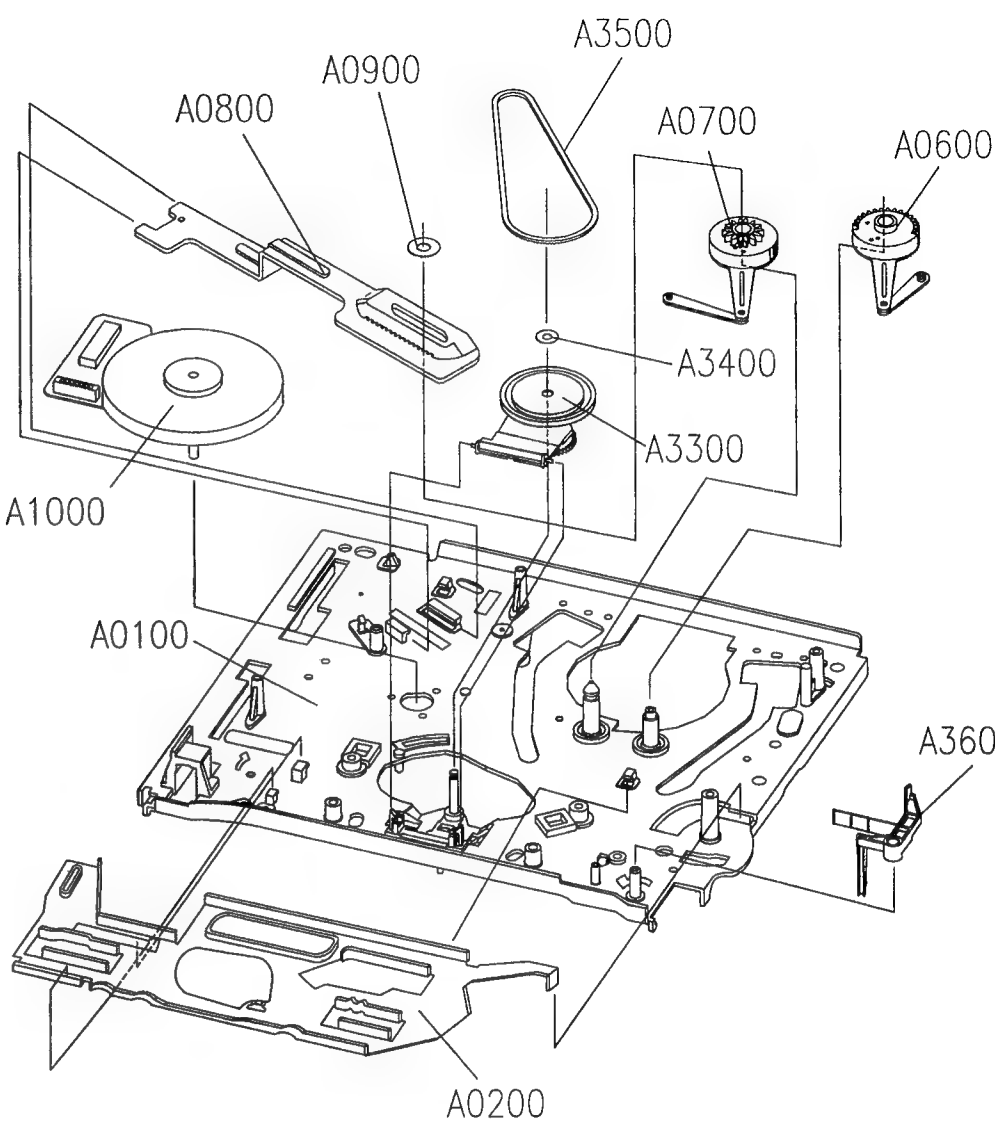
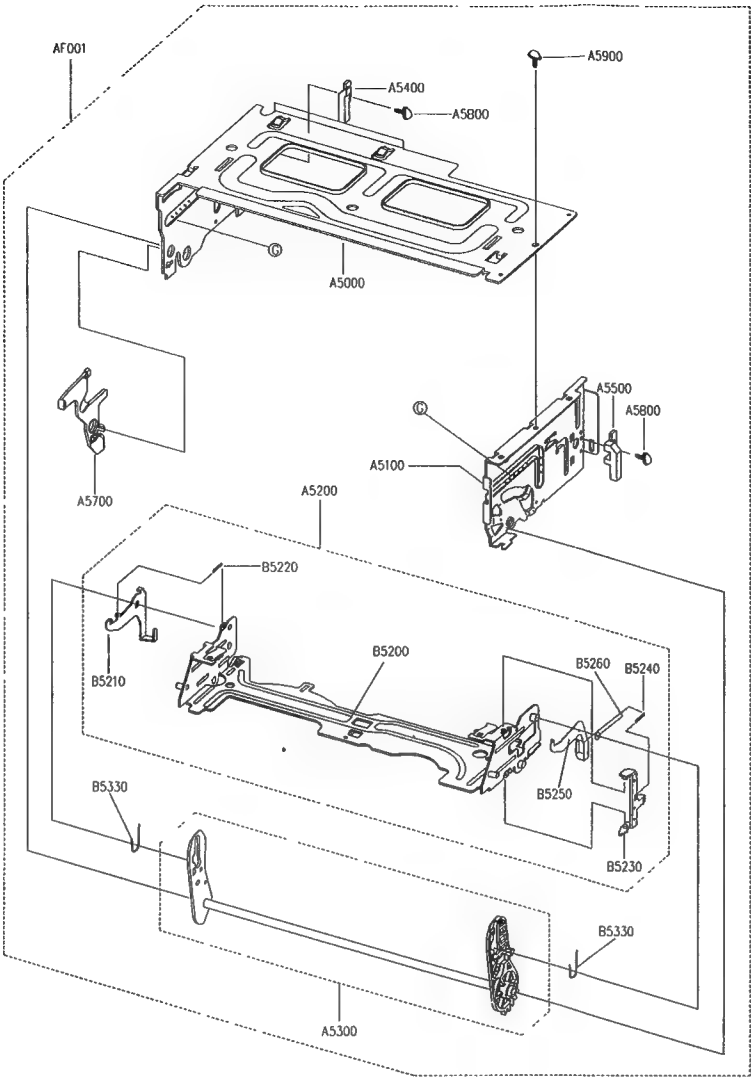
8-1. DECK ASSY

The components identified by shading and mark  are critical for safety. Replace only with part number specified.

- 13VM is KV-13VM40
- 13VMW is KV-13VM41
- 20VM is KV-20VM40
- 20VS is KV-20VS40

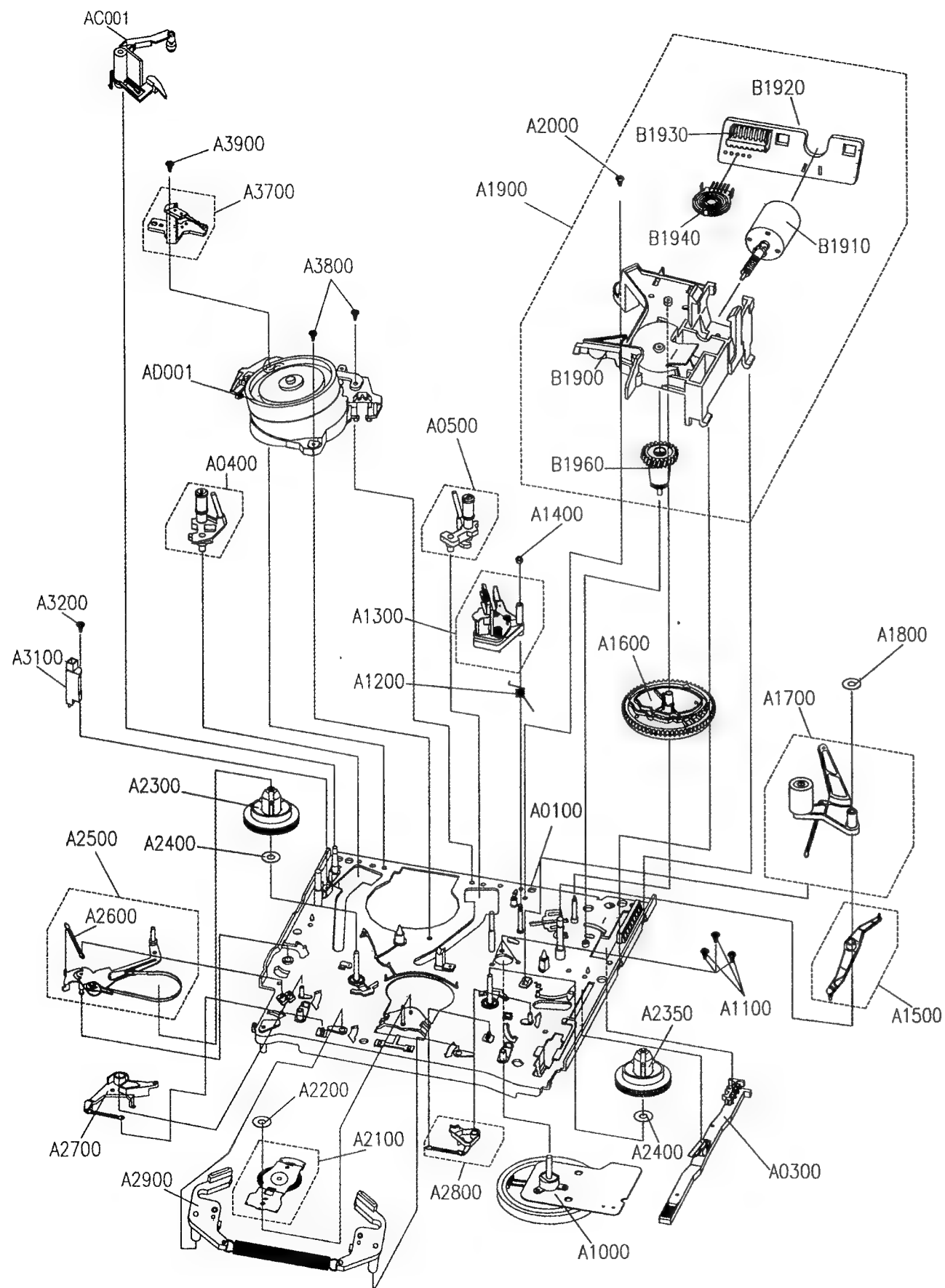
DECK ASSY COMPLETE

REF. NO.	P/N	DESCRIPTION	SPEC	MODEL
M192	9-882-536-01	DRN-7604	DECK AS	"13VM,13VMW,20VM"
M192	9-882-537-01	DRN-7401	DECK AS	20VS



REF.NO.	PART NO.	DESCRIPTION	REMARK
A5000	9-882-723-01	PLATE TOP	SECC T1.0
A5100	9-882-724-01	BRACKET F/L R	SECC T1.0
A5200	9-882-725-01	CST HOLDER AS	K-MECHA
A5300	9-882-726-01	LOADING LEVER AS	K-MECHA
A5400	9-882-727-01	LINK PRISM L	PMMA(HI-855M)NATURA
A5500	9-882-728-01	LINK PRISM R	PMMA(HI-855M)NATURAL
A5700	9-882-729-01	OPENER DOOR	DURACON M90-02 BLACK
A5800	9-882-730-01	SCREW TAPPTITE	TT3 WAS 2.6X6 MFZN
A5900	9-882-731-01	SCREW TAPPTITE	TT3 WAS 3X6 MFZN
AF001	9-882-735-01	F/L AS	K-MECHA
B5200	9-882-743-01	HOLDER AS	K-MECHA
B5210	9-882-744-01	LEVER SAFETY	SECC T1.0
B5230	9-882-745-01	LEVER RELEASE	DURACON M90-02 NATURAL
B5240	9-882-746-01	SPG RELEASE	SUS304WPB D0.23
B5250	9-882-747-01	LEVER SAFETY R	SUS304CSP T0.5
B5260	9-882-748-01	WASHER POLY	D6.5XD3.6XT0.5
B5330	9-882-749-01	SPG FL LEVER	SWPB D1.0


REF.NO.	PART NO.	DESCRIPTION	REMARK
A0100	9-882-679-01	MAIN BASE AS	K-MECHA
A0200	9-882-680-01	PLATE CONNECT	SECC T1.0
A0600	9-882-684-01	L LOADING AS	K-MECHA
A0700	9-882-685-01	R LOADING AS	K-MECHA
A0800	9-882-686-01	LOADING RACK AS	K-MECHA
A0900	9-882-687-01	WASHER POLY	D3.1XD8XT0.5
A1000	9-882-688-01	MOTOR CAPSTAN	F2QTB12
A1000	9-882-689-01	MOTOR CAPSTAN	DMVCMC06ER
A3300	9-882-713-01	REEL GEAR TOT AS	K-MECHA
A3400	9-882-714-01	POLYWASHER	D2.6XD6.0XT0.5
A3500	9-882-715-01	BELT REEL	CR68
A3600	9-882-716-01	LEVER RECORD SAFETY	F20-03 NATURAL




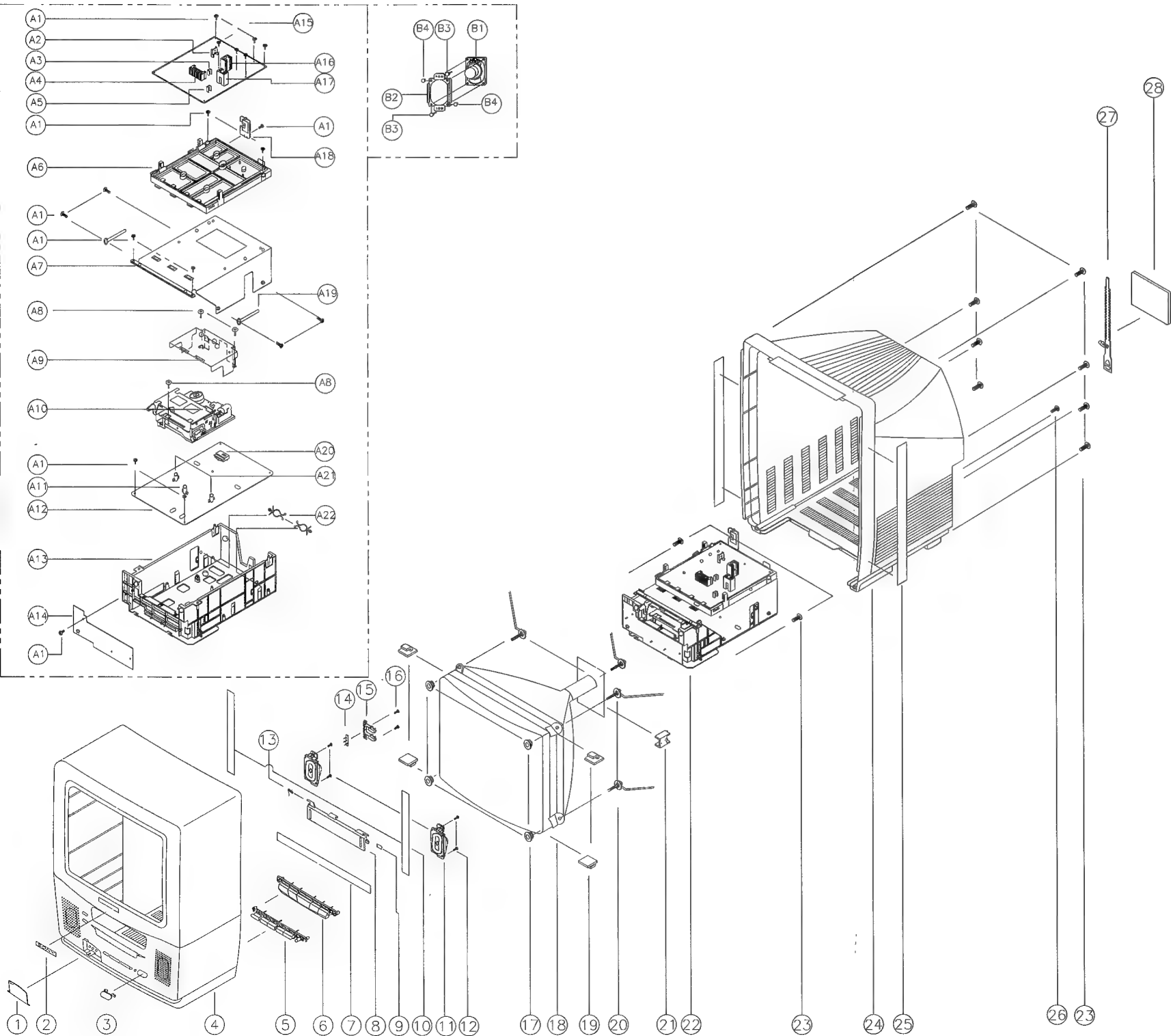
REF.NO.	PART NO.	DESCRIPTION	REMARK	MODEL
A0100	9-882-679-01	MAIN BASE AS	K-MECHA	
A0300	9-882-681-01	RACK F/L	PBT (4410GF) NATURAL	
A0400	9-882-682-01	S SLANT POLE AS	"G,FM,K-MECHA"	
A0500	9-882-683-01	T SLANT POLE AS	"G,FM,K-MECHA"	
A1000	9-882-688-01	MOTOR CAPSTAN	F2QTB12	
A1000	9-882-689-01	MOTOR CAPSTAN	DMVCMC06ER	
A1100	9-882-690-01	SCREW TAPPTITE	TT2 BIN-P 2.6X7 MFZN	
A1200	9-882-691-01	SPG AC HEAD	SUS304WPB D1.2	
A1300	9-882-692-01	AC HEAD AS	K-MECHA	
A1300	9-882-693-01	AC HEAD AS	K-MECHA(KUGAMI)	
A1400	9-882-694-01	NUT HEX	6N-1-5 MFZN	
A1500	9-882-695-01	LEVER RELAY	ZDC-2	
A1600	9-882-696-01	GEAR CAM	DELIN 500 NATURAL	
A1700	9-882-697-01	PINCH LEVER TOT AS	K-MECHA	
A1800	9-882-698-01	WASHER POLY	D3.6XD8XT0.5	
A1900	9-882-699-01	L/C BRKT TOT AS	K-MECHA	
A2000	9-882-700-01	SCREW TAPPTITE	TT3 RND 3X6 MFZN	
A2100	9-882-701-01	IDLER PLATE AS	K-MECHA	
A2200	9-882-702-01	POLYWASHER	D2.6XD6.0XT0.5	
A2300	9-882-703-01	TABLE REEL	F20 BLACK	
A2400	9-882-704-01	POLY SLIDER	D3.1XD6XT0.5	
A2500	9-882-705-01	TENSION BAND AS	K-MECHA	
A2600	9-882-706-01	SPG TENSION	SWPB D0.4	
A2700	9-882-707-01	S SUB BRAKE AS	K-MECHA	
A2800	9-882-708-01	T SUB BRAKE AS	K-MECHA	
A2900	9-882-709-01	MAIN BRAKE AS	K-MECHA	
A3100	9-882-710-01	HEAD FE	MH-132D	
A3100	9-882-711-01	HEAD FE	HVFHF0004AK	
A3200	9-882-712-01	SCREW TAPPTITE	TT2 BIN-P 2.6X10 MFZN	
A3700	9-882-717-01	EARTH BRACKET AS	"G,FM,K-MECHA"	
A3800	9-882-718-01	SCREW TAPPTITE	TT3 RND 3X10 MFZN	
A3900	9-882-719-01	SCREW TAPPTITE	TT3 RND 3X12 MFZN	
AC001	9-882-732-01	HEAD CLEANER AS	"FM,K-MECHA"	
AD001	9-882-733-01	DRUM PRICE AS	CYN-K410	
AD001	9-882-734-01	DRUM PRICE AS	CYN-K610H	
B1900	9-882-737-01	L/C BRKT AS	K-MECHA	
B1910	9-882-738-01	L/C MOTOR AS	K-MECHA	
B1920	9-882-739-01	PCB L/C MOTOR	PHENOL T1.6	
B1930	9-882-740-01	CONN WAFER (ANGLE)	00-8283-0711-00000	
B1940	9-882-741-01	SWICH CAM	MMS00320ZMBO	
B1960	9-882-742-01	WHEEL WORM	DERLIN 100 NATURAL	


8-2. MECHANICAL EXPLODED VIEWS


1) KV-20VS40


Les composants identifiés par une trame et une marque  sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

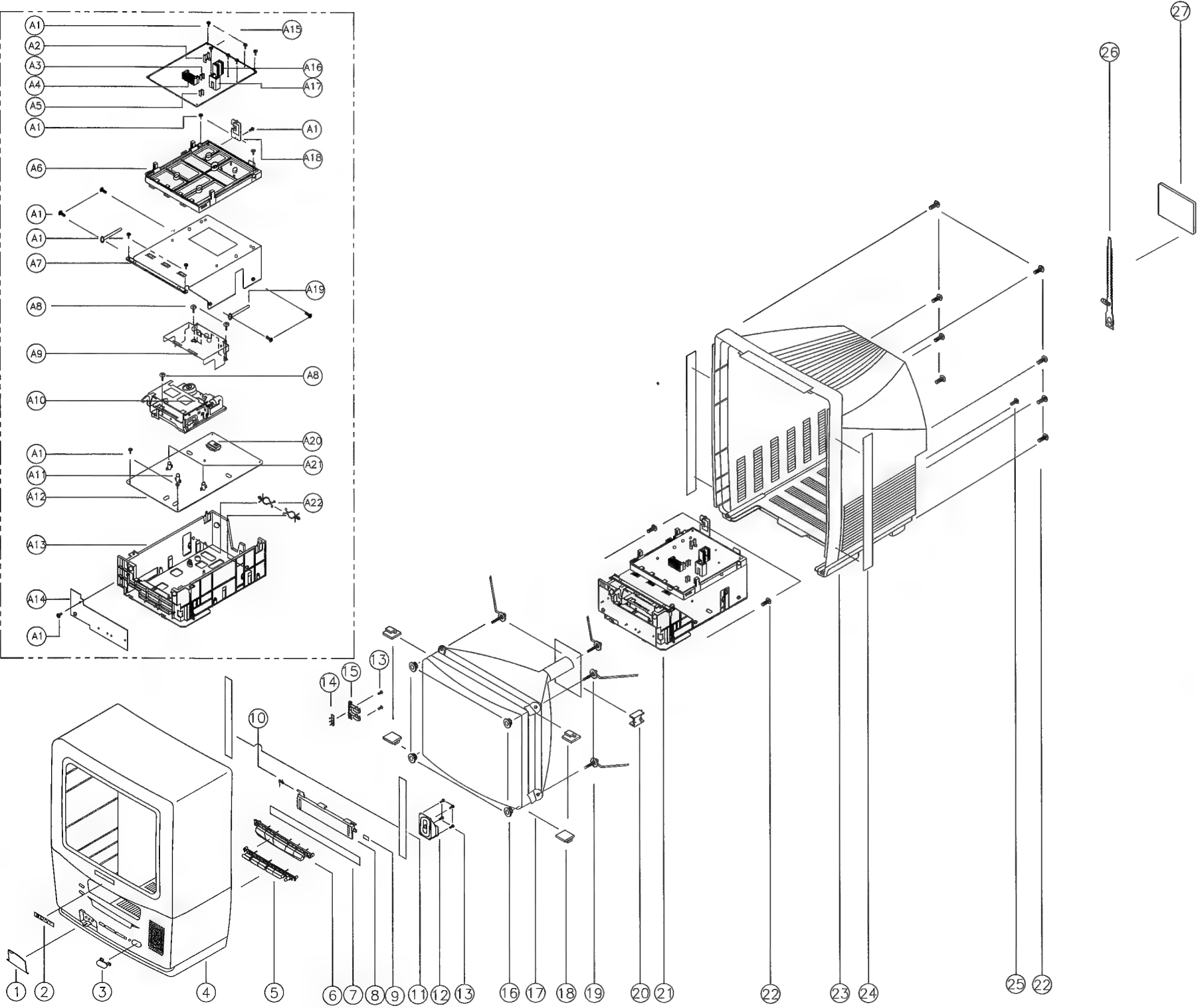
The componants identified by shading and mark  are critical for safety. Replace only with part number specified.





NO	REF.NO.	PART NO.	SPEC	DESCRIPTION
B4	SP01C	9-884-605-01	BRKT DAMPER	TMR-CA/NF BK
B3	SP01D	9-884-605-01	BRKT DAMPER	TMR-CA/NF BK
B2	SP01B	9-884-604-01	BRKT SPKR	FR POH BK
B1	SP01	9-884-612-01	SPKR	AS50X70A 3W 8 OHM
A22	M191B	9-882-851-01	CLAMP WIRE	EGI T0.4+PVC COATING
A21	SN03A	9-882-539-01	HOLDER SENSOR	FR ABS
A20	M194	9-882-853-01	SHIELD CASE AS	7243900+6722900
A19	M382B	9-882-852-01	CLAMP WIRE	NYLON 66
A18	M351	9-882-469-01	HOLDER CORD	FR HIPS BK
A17	I301A		HEAT SINK	AL EX BK (D Board)
A16	Q402A		HEAT SINK	AL EX BK (D Board)
A15	M231	9-882-468-01	HOLDER AC CORD	NYLON 66 UL/CSA
A14		9-882-079-01	MF MOUNT COMPLETE	MF Assy for All Models SVC
A13	M382	9-882-756-01	FRAME MAIN PCB	FR HIPS BK
A12		9-882-155-01	MA MOUNT COMPLETE	MA Assy for 20VS40 SVC
A11	DN03A	9-882-757-01	HOLDER IR	ABS
A10	M192	9-882-536-01	DECK AS	DRN-7604
A9	M193	9-882-850-01	SHIELD TOP AS	7246900+7238900
A8	M211B	9-882-761-01	SCREW TAPPING	T2S TRS 4X16 MFZN BK
A7	M191	9-882-534-01	COVER TOP AS	7241900+7535500
A6	M381	9-882-472-01	FRAME POWER	FR HIPS BK
A5	I817A		HEAT SINK	AL EX (D Board)
A4	I812A		HEAT SINK	AL EX BK (D Board)
A3	D828A		HEAT SINK	AL EX BK (D Board)
A2	I801A		HEAT SINK	A1050P-H24 T1.6 (D Board)
A1	M351A	9-882-535-01	SCREW TAPPING	T2S WAS 3X10 MFZN
28	M541	-	SPEC PLATE	PE FILM
27	M211D	-	CLAMP CORD	NYLON 66 BLK 5280N
26	M211C	9-882-535-01	SCREW TAPPING	T2S WAS 3X10 MFZN BK
25	M781		CLOTH BLACK	CLOTH 400X20XT0.5
24	M211	9-882-106-01	COVER BACK	FR HIPS BK
23	M211A	9-882-761-01	SCREW TAPPING	T2S TRS 4X16 MFZN BK
22		-	PCB MAIN AS	KV-20VS40
21	I901A		HEAT SINK	A1015P-H24 T2.0 (C Board)
20	CRT1A	9-882-095-01	SCREW CRT FIX	30X80 BK
19	M352	9-882-115-01	HOLDER DGC	NYLON 66 (DAC-20)
18	 V901	8-738-768-01	CRT BARE	A51LDG50X
17	CRT1B	9-882-097-01	WASHER RUBBER	CR T2.0
16	M491A	9-882-471-01	SCREW TAPPING	T2S WAS 3X12 MFZN BK
15	M491	9-882-117-01	BUTTON B	ABS BK0102A
14	M291	9-882-114-01	INDICATOR LED	PC CLEAR
13	M671	9-882-125-01	SPRING	SWPB 0.4
12	SP01A	9-882-761-01	SCREW TAPPING	T2S TRS 4X16 MFZN BK
11		-	BRKT SPEAKER AS	
10	M201B		CLOTH BLACK	CLOTH 320X12X0.5
9	M782		CLOTH BLACK	CLOTH T0.5 L=8
8	M282	9-882-112-01	DOOR F/L	ABS BK0102A
7	M201C		CLOTH BLACK	CLOTH 320X12X0.5
6	M492	9-882-120-01	BUTTON A	ABS BK0102A
5	M493	9-882-123-01	BUTTON C	ABS BK0102A
4	M201	9-882-101-01	MASK FRONT	FR HIPS BK
3	M551	9-882-755-01	DECO SENSOR	PC SMOG
2	M561	4-046-161-01	SONY EMBLEM MARK BRAND	#8 HIPS BK STAMPING
1	M281	9-882-109-01	DOOR	ABS BK0102A


Les composants identifiés par une trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

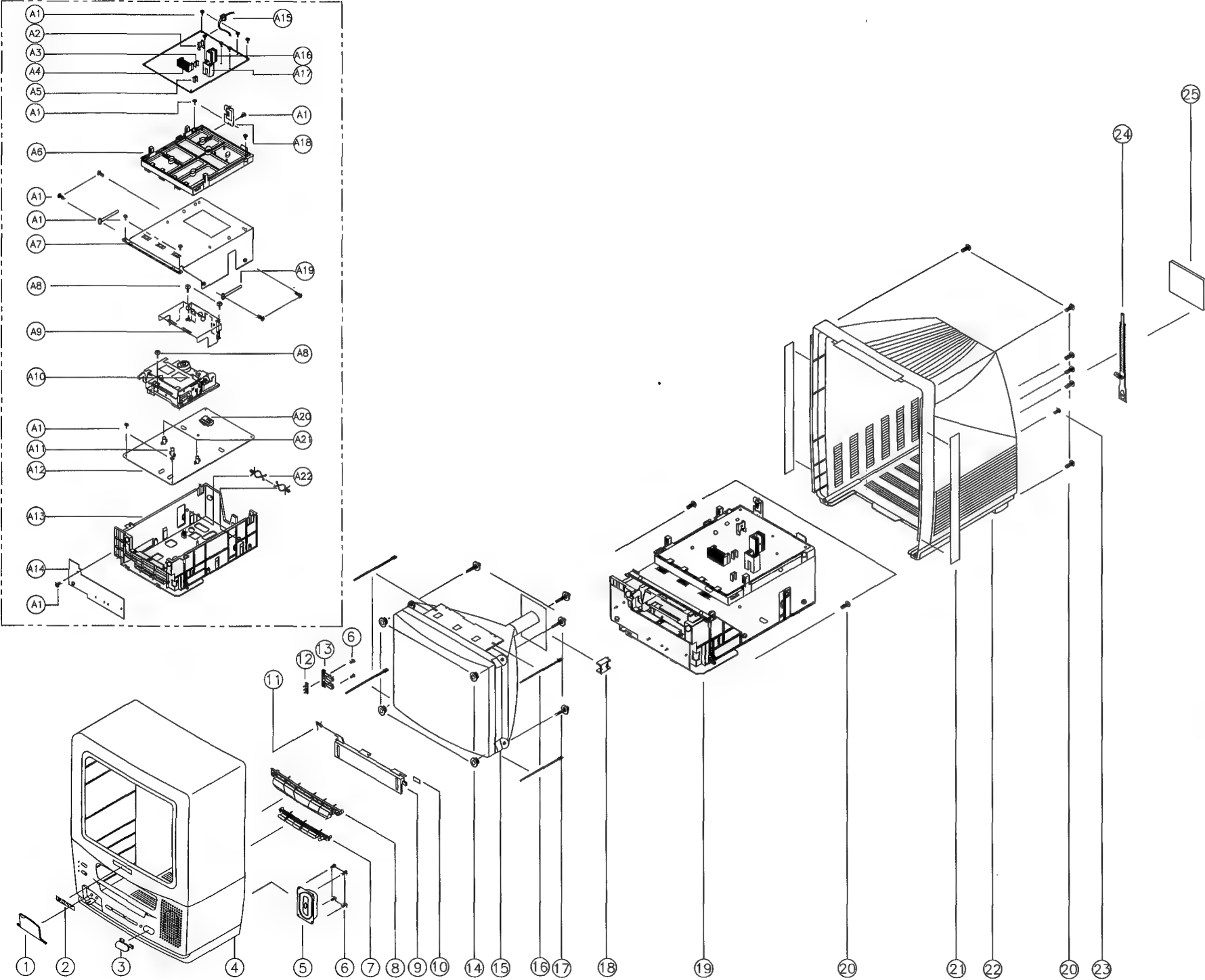
The componants identified by shading and mark  are critical for safety. Replace only with part number specified.




NO	REF.NO.	PART NO.	SPEC	DESCRIPTION
A22	M191B	9-882-851-01	CLAMP WIRE	EGI T0.4+PVC COATING
A21	SN03A	9-882-539-01	HOLDER SENSOR	FR ABS
A20	M194	9-882-853-01	SHIELD CASE AS	7243900+6722900
A19	M382B	9-882-852-01	CLAMP WIRE	NYLON 66
A18	M351	9-882-469-01	HOLDER CORD	FR HIPS BK
A17	I301A		HEAT SINK	AL EX BK (D Board)
A16	Q402A		HEAT SINK	AL EX BK (D Board)
A15	M231	9-882-468-01	HOLDER AC CORD	NYLON 66 UL/CSA
A14		9-882-079-01	MF MOUNT COMPLETE	MF Assy for All Models SVC
A13	M382	9-882-756-01	FRAME MAIN PCB	FR HIPS BK
A12		9-882-154-01	MA MOUNT COMPLETE	MA Assy for 20VM40 SVC
A11	DN03A	9-882-757-01	HOLDER IR	ABS
A10	M192	9-882-537-01	DECK AS	DRN-7401
A9	M193	9-882-850-01	SHIELD TOP AS	7246900+7238900
A8	M211B	9-882-761-01	SCREW TAPPING	T2S TRS 4X16 MFZN BK
A7	M191	9-882-534-01	COVER TOP AS	7241900+7535500
A6	M381	9-882-472-01	FRAME POWER	FR HIPS BK
A5	I817A		HEAT SINK	AL EX (D Board)
A4	I812A		HEAT SINK	AL EX BK (D Board)
A3	D828A		HEAT SINK	AL EX BK (D Board)
A2	I801A		HEAT SINK	A1050P-H24 T1.6 (D Board)
A1	M351A	9-882-535-01	SCREW TAPPING	T2S WAS 3X10 MFZN
27	M541	-	SPEC PLATE	PE FILM
26	M211D	-	CLAMP CORD	NYLON 66 BLK 5280N
25	M211C	9-882-535-01	SCREW TAPPING	T2S WAS 3X10 MFZN
24	M781		CLOTH BLACK	CLOTH 400X20XT0.5
23	M211	9-882-107-01	COVER BACK	FR HIPS BK
22	M211A	9-882-761-01	SCREW TAPPING	T2S TRS 4X16 MFZN BK
21	-		PCB MAIN AS	KV-20VM40
20	I901A		HEAT SINK	A1015P-H24 T2.0 (C Board)
19	CRT1A	9-882-095-01	SCREW CRT FIX	30X80 BK
18	M352	9-882-115-01	HOLDER DGC	NYLON 66 (DAC-20)
17	 V901	8-798-768-01	CRT BARE	A51LDG50X
16	CRT1B	9-882-097-01	WASHER RUBBER	CR T2.0
15	M491	9-882-116-01	BUTTON B	ABS BK713A
14	M291	9-882-114-01	INDICATOR LED	PC CLEAR
13	SP01A	9-882-535-01	SCREW TAPPING	T2S WAS 3X10 MFZN
12	SP01	9-882-136-01	SPEAKER	AS50X70 3W 8 OHM
11	M201B		CLOTH BLACK	CLOTH 320X12X0.5
10	M671	9-882-125-01	SPRING	SWPB 0.4
9	M782		CLOTH BLACK	CLOTH T0.5 L=8
8	M282	9-881-111-01	DOOR F/L	ABS BK713A
7	M201C		CLOTH BLACK	CLOTH 320X12X0.5
6	M492	9-882-119-01	BUTTON A	ABS BK713A
5	M493	9-882-122-01	BUTTON C	ABS BK713A
4	M201	9-882-102-01	MASK FRONT	FR HIPS BK
3	M551	9-882-755-01	DECO SENSOR	PC SMOG
2	M561	4-046-161-01	SONY EMBLEM MARK BRAND	#8 HIPS BK STAMPING
1	M281	9-882-108-01	DOOR	ABS BK713A

Les composants identifiés par une trame et une marque  sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

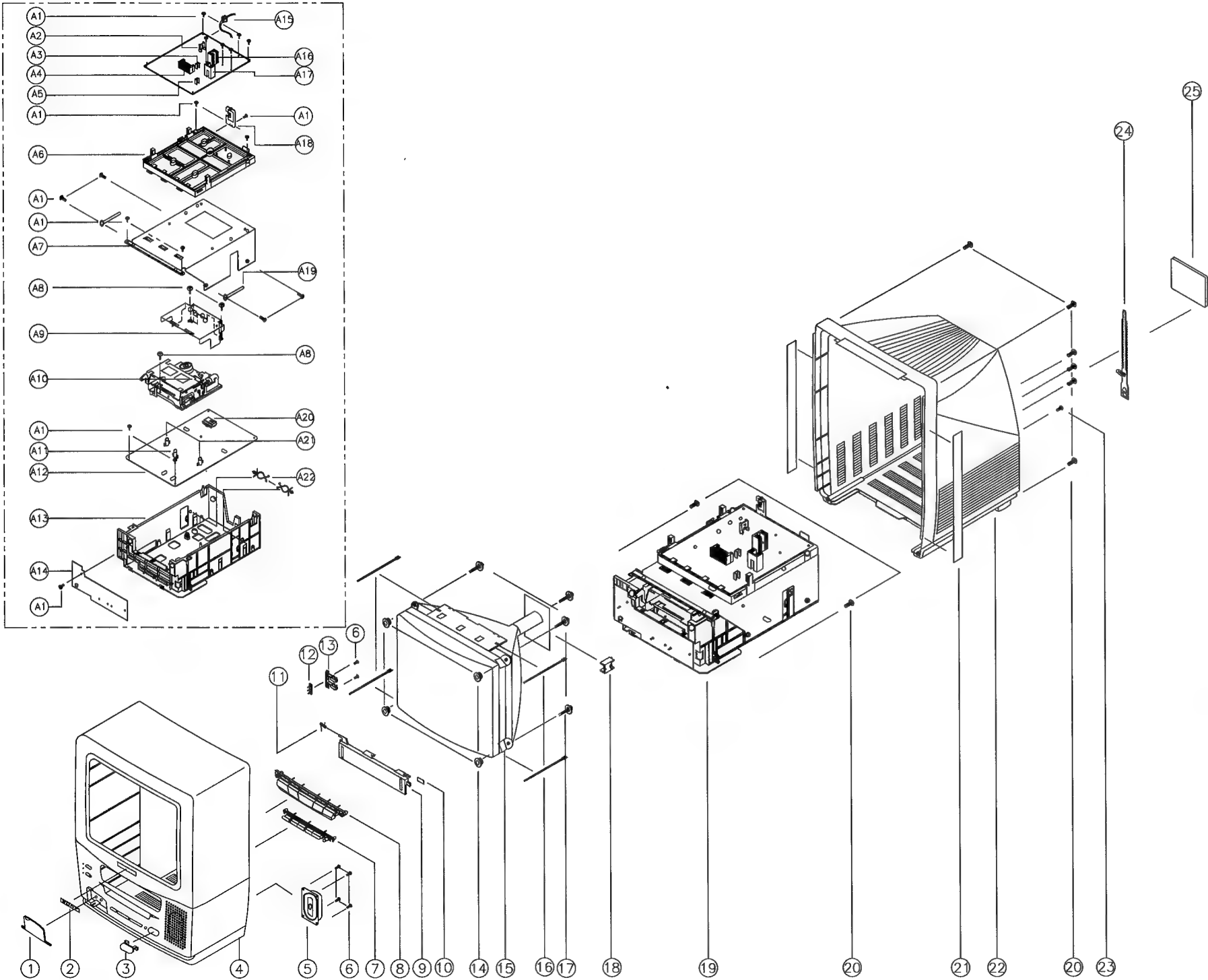
The componants identified by shading and mark  are criti-cal for safety. Replace only with part number specified.



NO	REF.NO.	PART NO.	SPEC	DESCRIPTION
A22	M191B	9-882-851-01	CLAMP WIRE	EGI T0.4+PVC COATING
A21	SN03A	9-882-539-01	HOLDER SENSOR	FR ABS
A20	M194	9-882-853-01	SHIELD CASE AS	7243900+6722900
A19	M382B	9-882-852-01	CLAMP WIRE	NYLON 66
A18	M351	9-882-469-01	HOLDER CORD	FR HIPS BK
A17	I301A		HEAT SINK	AL EX BK (D Board)
A16	Q402A		HEAT SINK	AL EX BK (D Board)
A15	M231	9-882-468-01	HOLDER AC CORD	NYLON 66 UL/CSA
A14		9-882-079-01	MF MOUNT COMPLETE	MF Assy for All Models SVC
A13	M382	9-882-756-01	FRAME MAIN PCB	FR HIPS BK
A12		9-882-139-01	MA MOUNT COMPLETE	"MA Assy for 13VM40,13VM41
A11	DN03A	9-882-757-01	HOLDER IR	ABS
A10	M192	9-882-537-01	DECK AS	DRN-7401
A9	M193	9-882-850-01	SHIELD TOP AS	7248900+7238900
A8	M211B	9-882-761-01	SCREW TAPPING	T2S TRS 4X16 MFZN BK
A7	M191	9-882-534-01	COVER TOP AS	7241900+7535500
A6	M381	9-882-472-01	FRAME POWER	FR HIPS BK
A5	I817A		HEAT SINK	AL EX (D Board)
A4	I812A		HEAT SINK	AL EX BK (D Board)
A3	D828A		HEAT SINK	AL EX BK (D Board)
A2	I801A		HEAT SINK	A1050P-H24 T1.6 (D Board)
A1	M491A	9-882-535-01	SCREW TAPPING	T2S WAS 3X10 MFZN
25	M541	-	SPEC PLATE	PE FILM
24	M211D	-	CLAMP CORD	NYLON 66 BLK 5280N
23	M211C	9-882-535-01	SCREW TAPPING	T2S WAS 3X10 MFZN BK
22	M211	9-882-104-01	COVER BACK	FR HIPS BK
21	M781		CLOTH BLACK	CLOTH 300X20XT0.5
20	M211A	9-882-761-01	SCREW TAPPING	T2S TRS 4X16 MFZN BK
19		-	PCB MAIN AS	KV-13VM40
18	I901A		HEAT SINK	A1015P-H24 T2.0 (C Board)
17	CRT1A	9-882-096-01	SCREW CRT FIX	SWRM+SK-5(L=30)
16	M681	9-882-126-01	TIE CABLE	NYLON66 DA100
15	 V901	8-735-562-01	CRT BARE	A34JBU70X
14	CRT1B	9-882-097-01	WASHER RUBBER	CR T2.0
13	M491	9-882-116-01	BUTTON B	ABS BK713A
12	M291	9-882-114-01	INDICATOR LED	PC CLEAR
11	M671	9-882-125-01	SPRING	SWPB 0.4
10	M782		CLOTH BLACK	CLOTH T0.5 L=8
9	M282	9-882-111-01	DOOR F/L	ABS BK713A
8	M492	9-882-119-01	BUTTON A	ABS BK713A
7	M493	9-882-122-01	BUTTON C	ABS BK713A
6	SP01A	9-882-535-01	SCREW TAPPING	T2S WAS 3X10 MFZN
5	SP01	9-882-136-01	SPEAKER	AS50X70 3W 8 OHM
4	M201	9-882-099-01	MASK FRONT	FR HIPS BK
3	M551	9-882-755-01	DECO SENSOR	PC SMOG
2	M561	1-528359-31	SONY EMBLEM MARK BRAND	#6 HIPS STAMPING
1	M281	9-882-108-01	DOOR	ABS BH713A

Les composants identifiés par
une trame et une marque Δ
sont critiques pour la securite.
Ne les remplacer que par une
piece portant le numero specifie.

The componants identified by
shading and mark Δ are criti-
cal for safety.
Replace only with part number
specified.



NO	REF.NO.	PART NO.	SPEC	DESCRIPTION
A22	M191B	9-882-851-01	CLAMP WIRE	EGI T0.4+PVC COATING
A21	SN03A	9-882-539-01	HOLDER SENSOR	FR ABS
A20	M194	9-882-853-01	SHIELD CASE AS	7243900+6722900
A19	M382B	9-882-852-01	CLAMP WIRE	NYLON 66
A18	M351	9-882-470-01	HOLDER CORD	FR HIPS WH 110A
A17	I301A		HEAT SINK	AL EX BK (D Board)
A16	Q402A		HEAT SINK	AL EX BK (D Board)
A15	M231	9-882-468-01	HOLDER AC CORD	NYLON 66 UL/CSA
A14		9-882-079-01	MF MOUNT COMPLETE	MF Assy for All Models SVC
A13	M382	9-882-756-01	FRAME MAIN PCB	FR HIPS WH 110A
A12		9-882-139-01	MA MOUNT COMPLETE	"MA Assy for 13VM40,13VM41 SVC"
A11	DN03A	9-882-757-01	HOLDER IR	ABS
A10	M192	9-882-537-01	DECK AS	DRN-7401
A9	M193	9-882-850-01	SHIELD TOP AS	7246900+7238900
A8	M211B	9-882-761-01	SCREW TAPPING	T2S TRS 4X16 MFZN BK
A7	M191	9-882-534-01	COVER TOP AS	7241900+7535500
A6	M381	9-882-472-01	FRAME POWER	FR HIPS BK
A5	I817A		HEAT SINK	AL EX (D Board)
A4	I812A		HEAT SINK	AL EX BK (D Board)
A3	D828A		HEAT SINK	AL EX BK (D Board)
A2	I801A		HEAT SINK	A1050P-H24 T1.6 (D Board)
A1	M491A	9-882-535-01	SCREW TAPPING	T2S WAS 3X10 MFZN
25	M541	-	SPEC PLATE	PE FILM
24	M211D	-	CLAMP CORD	NYLON 66 BLK 5280N
23	M211C	9-882-535-01	SCREW TAPPING	T2S WAS 3X10 MFZN BK
22	M211	9-882-105-01	COVER BACK	FR HIPS WH
21	M781		CLOTH BLACK	CLOTH 300X20XT0.5
20	M211A	9-882-761-01	SCREW TAPPING	T2S TRS 4X16 MFZN BK
19		-	PCB MAIN AS	KV-13VM41
18	I901A		HEAT SINK	A1015P-H24 T2.0 (C Board)
17	CRT1A	9-882-096-01	SCREW CRT FIX	SWRM+SK-5(L=30)
16	M681	9-882-126-01	TIE CABLE	NYLON66 DA100
15	Δ V901	8-735-562-01	CRT BARE	A34JBU70X
14	CRT1B	9-882-097-01	WASHER RUBBER	CR T2.0
13	M491	9-882-118-01	BUTTON B	ABS WH 110A
12	M291	9-882-114-01	INDICATOR LED	PC CLEAR
11	M671	9-882-125-01	SPRING	SWPB 0.4
10	M782		CLOTH BLACK	CLOTH T0.5 L=8
9	M282	9-882-113-01	DOOR F/L	ABS WH110A
8	M492	9-882-121-01	BUTTON A	ABS WH110A
7	M493	9-882-124-01	BUTTON C	ABS WH110A
6	SP01A	9-882-535-01	SCREW TAPPING	T2S WAS 3X10 MFZN
5	SP01	9-882-136-01	SPEAKER	AS50X70 3W 8 OHM
4	M201	9-882-100-01	MASK FRONT	FR HIPS WH080A
3	M551	9-882-755-01	DECO SENSOR	PC SMOG
2	M561	1-528359-31	SONY EMBLEM MARK BRAND	#6 HIPS STAMPING
1	M281	9-882-110-01	DOOR	ABS WH110A

SECTION 9 ELECTRICAL PARTS LIST

MA

The components identified by shading and mark **△** are critical for safety

Replace only with part number specified

Les composants identifiés par une trame et une marque **△** sont critiques pour la sécurité
Ne les remplacer que par une pièce portant le numéro spécifié

DESCRIPTION

SPEC

MODEL

When indicating parts by reference number, please include the board name.


- All variable and adjustable resistors have characteristic curve B, unless otherwise noted
- 13VM is KV-13VM40 and KV-13VM42
- 13VMW is KV-13VM41 and KV-13VM43
- 20VM is KV-20VM40 and KV-20VM42
- 20VS is KV-20VS40 and KV-20VS42


REF.NO.	PART NO.	DESCRIPTION	SPEC	MODEL
9-882-139-01	MA MOUNT COMPLETE	MA Assy for 13VM40,13VM41	SVC	13VM,13VMW
9-882-154-01	MA MOUNT COMPLETE	MA Assy for 20VM40	SVC	20VM
9-882-155-01	MA MOUNT COMPLETE	MA Assy for 20VS40	SVC	20VS
9-885-003-58	MA MOUNT COMPLETE	FOR 13VM V-Chip Ver		13VM, 13VMW
9-885-003-59	MA MOUNT COMPLETE	FOR 20VM V-Chip Ver		20VM
9-885-003-60	MA MOUNT COMPLETE	FOR 20VS V-Chip Ver		20VS
<CAPACITOR>				
C101	9-882-156-01	C ELECTRO	50V RSS 4.7MF (5X11) TP	
C106	9-882-157-01	C ELECTRO	25V RSS 100MF (6 3X11) TP	
C108	9-882-158-01	C ELECTRO	16V RSS 1000MF (10X20) TP	
C110	9-882-159-01	C ELECTRO	50V RSS 100MF (8X11.5) TP	
C111	9-882-160-01	C ELECTRO	50V RSS 1MF (5X11) TP	20VS only
C113	9-882-161-01	C ELECTRO	25V RSS 47MF (5X11) TP	20VS only
C120	9-882-160-01	C ELECTRO	50V RSS 1MF (5X11) TP	
C122	9-882-162-01	C ELECTRO	50V RSS 0.47MF (5X11) TP	
C124	9-882-161-01	C ELECTRO	25V RSS 47MF (5X11) TP	
C128	9-882-161-01	C ELECTRO	25V RSS 47MF (5X11) TP	
C203	9-882-157-01	C ELECTRO	25V RSS 100MF (6.3X11) TP	
C204	9-882-161-01	C ELECTRO	25V RSS 47MF (5X11) TP	
C206	9-882-160-01	C ELECTRO	50V RSS 1MF (5X11) TP	
C214	9-882-161-01	C ELECTRO	25V RSS 47MF (5X11) TP	
C218	9-882-161-01	C ELECTRO	25V RSS 47MF (5X11) TP	20VS only
C361	9-882-163-01	C MYLAR	100V 4700PF J (TP)	
C362	9-882-164-01	C ELECTRO	50V RT 2.2MF (6.3X11) TP	
C364	9-882-216-01	C MYLAR	100V 0.022MF J TP	
C461	9-882-217-01	C ELECTRO	16V RSS 2200MF (13X25) TP	
C463	△ 9-882-218-01	C ELECTRO	50V RSS 10MF (5X11) TP	
C465	9-882-219-01	C MYLAR	100V 1000PF J (TP)	
C466	9-882-160-01	C ELECTRO	50V RSS 1MF (5X11) TP	
C468	9-882-218-01	C ELECTRO	50V RSS 10MF (5X11) TP	
C469	9-882-220-01	C MYLAR	50V EU 0.1MF J (TP)	
C470	9-882-221-01	C ELECTRO	50V RSS 22MF (5X11) TP	
C501	9-882-162-01	C ELECTRO	50V RSS 0.47MF (5X11) TP	
C502	9-882-216-01	C MYLAR	100V 0.022MF J TP	
C512	9-882-161-01	C ELECTRO	25V RSS 47MF (5X11) TP	
C601	9-882-218-01	C ELECTRO	50V RSS 10MF (5X11) TP	
C616	9-882-160-01	C ELECTRO	50V RSS 1MF (5X11) TP	


REF.NO.	PART NO.	DESCRIPTION	SPEC	MODEL
C617	9-882-157-01	C ELECTRO	25V RSS 100MF (6.3X11) TP	20VS only
C619	9-882-222-01	C MYLAR	100V 0.082MF J (TP)	20VS only
C621	9-882-221-01	C ELECTRO	50V RSS 22MF (5X11) TP	20VS only
C622	9-882-221-01	C ELECTRO	50V RSS 22MF (5X11) TP	20VS only
C623	9-882-221-01	C ELECTRO	50V RSS 22MF (5X11) TP	20VS only
C624	9-882-221-01	C ELECTRO	50V RSS 22MF (5X11) TP	20VS only
C625	9-882-230-01	C ELECTRO	50V RSS 3.3MF (5X11) TP	20VS only
C626	9-882-230-01	C ELECTRO	50V RSS 3.3MF (5X11) TP	20VS only
C628	9-882-157-01	C ELECTRO	25V RSS 100MF (6.3X11) TP	
C630	9-882-211-01	C ELECTRO	16V RSS 220MF (8X11.5) TP	20VS only
C634	9-882-157-01	C ELECTRO	25V RSS 100MF (6.3X11) TP	
C636	9-882-211-01	C ELECTRO	16V RSS 220MF (8X11.5) TP	20VS only
C636	9-882-231-01	C ELECTRO	16V RSS 470MF (10X12.5)TP	20VM, 13VM, 13VMW
C637	9-882-220-01	C MYLAR	50V EU 0.1MF J (TP)	
C639	9-882-220-01	C MYLAR	50V EU 0.1MF J (TP)	20VS only
C640	9-882-232-01	C ELECTRO	50V RSM 1MF (4X7) TP	
C641	9-882-233-01	C ELECTRO	50V RSM 10MF (5X7) TP	20VS only
C642	9-882-233-01	C ELECTRO	50V RSM 10MF (5X7) TP	
C643	9-882-160-01	C ELECTRO	50V RSS 1MF (5X11) TP	
C644	9-882-218-01	C ELECTRO	50V RSS 10MF (5X11) TP	20VS only
C645	9-882-218-01	C ELECTRO	50V RSS 10MF (5X11) TP	
C650	9-882-217-01	C ELECTRO	16V RSS 2200MF (13X25) TP	
C651	9-882-217-01	C ELECTRO	16V RSS 2200MF (13X25) TP	20VS only
C652	9-882-218-01	C ELECTRO	50V RSS 10MF (5X11) TP	20VS only
C653	9-882-218-01	C ELECTRO	50V RSS 10MF (5X11) TP	
C710	9-882-234-01	C MYLAR	50V EU 0.068MF J (TP)	
C711	9-882-235-01	C MYLAR	50V 6800PF J (TP)	
C712	9-882-234-01	C MYLAR	50V EU 0 068MF J (TP)	
C713	9-882-161-01	C ELECTRO	25V RSS 47MF (5X11) TP	
C718	9-882-236-01	C ELECTRO	16V RSM 47MF (5X7) TP	
C726	9-882-236-01	C ELECTRO	16V RSM 47MF (5X7) TP	
C727	9-882-251-01	C SUPER	5.5V 0.1F F (TAPPING)	
C728	9-882-236-01	C ELECTRO	16V RSM 47MF (5X7) TP	
CA02	9-882-081-01	C ELECTRO	16V RSM 100MF (6.3X7) TP	
CA08	9-882-232-01	C ELECTRO	50V RSM 1MF (4X7) TP	
CA09	9-882-233-01	C ELECTRO	50V RSM 10MF (5X7) TP	
CN06	9-882-080-01	C CERA	25V F 0.01MF Z (AXIAL)	
CN07	9-882-080-01	C CERA	25V F 0.01MF Z (AXIAL)	
CN08	9-882-157-01	C ELECTRO	25V RSS 100MF (6.3X11) TP	
CN09	9-882-080-01	C CERA	25V F 0.01MF Z (AXIAL)	
CN11	9-882-236-01	C ELECTRO	16V RSM 47MF (5X7) TP	
CN12	9-882-236-01	C ELECTRO	16V RSM 47MF (5X7) TP	

REF.NO.	PART NO.	DESCRIPTION	SPEC	MODEL
CN13	9-882-236-01	C ELECTRO	16V RSM 47MF (5X7) TP	
CN14	9-882-216-01	C MYLAR	100V 0.022MF J TP	
CN19	9-882-236-01	C ELECTRO	16V RSM 47MF (5X7) TP	
CN24	9-882-254-01	C ELECTRO	16V RSM 22MF (5X7)	
CN25	9-882-254-01	C ELECTRO	16V RSM 22MF (5X7)	
CN27	9-882-236-01	C ELECTRO	16V RSM 47MF (5X7) TP	
CN29	9-882-236-01	C ELECTRO	16V RSM 47MF (5X7) TP	
CU02	9-882-218-01	C ELECTRO	50V RSS 10MF (5X11) TP	
CU03	9-882-218-01	C ELECTRO	50V RSS 10MF (5X11) TP	
CU07	9-882-252-01	C MYLAR	50V EU 0 01MF J (TP)	
CU08	9-882-253-01	C MYLAR	100V 0.027MF J (TP)	
CU09	9-882-161-01	C ELECTRO	25V RSS 47MF (5X11) TP	
CU11	9-882-161-01	C ELECTRO	25V RSS 47MF (5X11) TP	
CU13	9-882-156-01	C ELECTRO	50V RSS 4.7MF (5X11) TP	
CU15	9-882-161-01	C ELECTRO	25V RSS 47MF (5X11) TP	
CU16	9-882-161-01	C ELECTRO	25V RSS 47MF (5X11) TP	
CU18	9-882-218-01	C ELECTRO	50V RSS 10MF (5X11) TP	
CU21	9-882-216-01	C MYLAR	100V 0.022MF J TP	
CU22	9-882-161-01	C ELECTRO	25V RSS 47MF (5X11) TP	
CU23	9-882-236-01	C ELECTRO	16V RSM 47MF (5X7) TP	
CU51	9-882-218-01	C ELECTRO	50V RSS 10MF (5X11) TP	20VS only
CU53	9-882-218-01	C ELECTRO	50V RSS 10MF (5X11) TP	20VS only
CU55	9-882-163-01	C MYLAR	100V 4700PF J (TP)	20VS only
CU56	9-882-157-01	C ELECTRO	25V RSS 100MF (6.3X11) TP	20VS only
CU58	9-882-161-01	C ELECTRO	25V RSS 47MF (5X11) TP	20VS only
CU60	9-882-157-01	C ELECTRO	25V RSS 100MF (6.3X11) TP	20VS only
CU61	9-882-163-01	C MYLAR	100V 4700PF J (TP)	20VS only
CU63	9-882-218-01	C ELECTRO	50V RSS 10MF (5X11) TP	20VS only
CU67	9-882-161-01	C ELECTRO	25V RSS 47MF (5X11) TP	20VS only
CU68	9-882-157-01	C ELECTRO	25V RSS 100MF (6.3X11) TP	20VS only
CU70	9-882-157-01	C ELECTRO	25V RSS 100MF (6.3X11) TP	20VS only
CU72	9-882-218-01	C ELECTRO	50V RSS 10MF (5X11) TP	20VS only
CU81	9-882-232-01	C ELECTRO	50V RSM 1MF (4X7) TP	20VS only
CU84	9-882-081-01	C ELECTRO	16V RSM 100MF (6.3X7) TP	20VS only
CY03	9-882-080-01	C CERA	25V F 0.01MF Z (AXIAL)	
CY05	9-882-236-01	C ELECTRO	16V RSM 47MF (5X7) TP	
CY18	9-882-236-01	C ELECTRO	16V RSM 47MF (5X7) TP	
CY22	9-882-220-01	C MYLAR	50V EU 0.1MF J (TP)	
CY25	9-882-232-01	C ELECTRO	50V RSM 1MF (4X7) TP	
CY29	9-882-254-01	C ELECTRO	16V RSM 22MF (5X7)	
CY31	9-882-232-01	C ELECTRO	50V RSM 1MF (4X7) TP	



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REF.NO.	PART NO.	DESCRIPTION	SPEC	MODEL
CY32	9-882-232-01	C ELECTRO	50V RSM 1MF (4X7) TP	
CY34	9-882-236-01	C ELECTRO	16V RSM 47MF (5X7) TP	
CY37	9-882-232-01	C ELECTRO	50V RSM 1MF (4X7) TP	
CY41	9-882-231-01	C ELECTRO	16V RSS 470MF (10X12.5)TP	
CY42	9-882-255-01	C CERA	50V B 100PF K (AXIAL)	
CY45	9-882-236-01	C ELECTRO	16V RSM 47MF (5X7) TP	
CY87	9-882-081-01	C ELECTRO	16V RSM 100MF (6 3X7) TP	
CY88	9-882-232-01	C ELECTRO	50V RSM 1MF (4X7) TP	
<DIODE>				
D101	9-882-256-01	DIODE	1N4148 (TAPPING)	
D103	9-882-257-01	DIODE ZENER	UZ-9 1BM 9 1V	20VS only
D104	9-882-256-01	DIODE	1N4148 (TAPPING)	20VS only
D201	9-882-256-01	DIODE	1N4148 (TAPPING)	
D202	9-882-256-01	DIODE	1N4148 (TAPPING)	
D203	9-882-256-01	DIODE	1N4148 (TAPPING)	
D405	9-882-256-01	DIODE	1N4148 (TAPPING)	
D406	9-882-256-01	DIODE	1N4148 (TAPPING)	
D407	9-882-264-01	DIODE	1N4003 (TAPPING)	
D463	 9-882-256-01	DIODE	1N4148 (TAPPING)	
D464	9-882-256-01	DIODE	1N4148 (TAPPING)	
D501	9-882-265-01	DIODE ZENER	UZ-3.3B	
D502	9-882-256-01	DIODE	1N4148 (TAPPING)	
D601	9-882-266-01	DIODE ZENER	MTZ 6.2-B (TAPPING)	
D602	9-882-266-01	DIODE ZENER	MTZ 6 2-B (TAPPING)	
D603	9-882-266-01	DIODE ZENER	MTZ 6.2-B (TAPPING)	20VS only
D604	9-882-266-01	DIODE ZENER	MTZ 6.2-B (TAPPING)	20VS only
D605	9-882-266-01	DIODE ZENER	MTZ 6 2-B (TAPPING)	
D606	9-882-266-01	DIODE ZENER	MTZ 6.2-B (TAPPING)	
D607	9-882-266-01	DIODE ZENER	MTZ 6.2-B (TAPPING)	
D608	9-882-266-01	DIODE ZENER	MTZ 6.2-B (TAPPING)	
D609	9-882-266-01	DIODE ZENER	MTZ 6.2-B (TAPPING)	20VS only
D610	9-882-266-01	DIODE ZENER	MTZ 6.2-B (TAPPING)	20VS only
D611	9-882-266-01	DIODE ZENER	MTZ 6.2-B (TAPPING)	
D612	9-882-266-01	DIODE ZENER	MTZ 6 2-B (TAPPING)	
D701	9-882-256-01	DIODE	1N4148 (TAPPING)	
D702	9-882-256-01	DIODE	1N4148 (TAPPING)	
D703	9-882-256-01	DIODE	1N4148 (TAPPING)	
D704	9-882-256-01	DIODE	1N4148 (TAPPING)	
D705	9-882-256-01	DIODE	1N4148 (TAPPING)	

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specified



REF.NO.	PART NO.	DESCRIPTION	SPEC	MODEL
D706	9-882-256-01	DIODE	1N4148 (TAPPING)	
D707	9-882-256-01	DIODE	1N4148 (TAPPING)	
D708	9-882-256-01	DIODE	1N4148 (TAPPING)	
D709	9-882-256-01	DIODE	1N4148 (TAPPING)	
D710	9-882-266-01	DIODE ZENER	MTZ 6 2-B (TAPPING)	
D711	9-882-256-01	DIODE	1N4148 (TAPPING)	
D712	9-882-256-01	DIODE	1N4148 (TAPPING)	
D713	9-882-264-01	DIODE	1N4003 (TAPPING)	
D715	9-882-256-01	DIODE	1N4148 (TAPPING)	
D716	9-882-266-01	DIODE ZENER	MTZ 6 2-B (TAPPING)	
D717	9-882-266-01	DIODE ZENER	MTZ 6 2-B (TAPPING)	
D718	9-882-266-01	DIODE ZENER	MTZ 6 2-B (TAPPING)	
D719	9-882-266-01	DIODE ZENER	MTZ 6.2-B (TAPPING)	
D720	9-882-266-01	DIODE ZENER	MTZ 6.2-B (TAPPING)	
DA01	9-882-257-01	DIODE ZENER	UZ-9.1BM 9 1V	
DN01	9-882-266-01	DIODE ZENER	MTZ 6 2-B (TAPPING)	
DN02	9-882-266-01	DIODE ZENER	MTZ 6.2-B (TAPPING)	
DN03	9-882-267-01	LED IR	SI5312-H	
DU01	9-882-256-01	DIODE	1N4148 (TAPPING)	
DU02	9-882-256-01	DIODE	1N4148 (TAPPING)	
DU50	9-882-256-01	DIODE	1N4148 (TAPPING)	20VS only
<IC>				
D102	9-882-268-01	IC	UPC574J	
I501	Δ 9-882-269-01	IC MAIN	TA1268N	
I601	9-882-270-01	IC AUDIO	UPC1853	20VS only
I602	Δ 9-882-271-01	IC AMP	TDA7231A	20VS only
I603	Δ 9-882-271-01	IC AMP	TDA7231A	
I705	9-882-272-01	IC MEMORY	24LC08B	
I706	9-882-273-01	IC	MN1280R	
I707	9-882-274-01	IC COMPARATOR	MN1380-L(RESET IC)	
I710	9-882-274-01	IC COMPARATOR	MN1380-L(RESET IC)	
IA01	9-882-275-01	IC SWITCHING	M52795SP	
IN01	9-882-276-01	IC SENSOR	SG-239S	
IN02	9-882-276-01	IC SENSOR	SG-239S	
IN03	Δ 9-882-277-01	IC	BA6209(ROHM)	
IY80	9-882-286-01	IC PREAMP	LA70011 (4HD)	13VM,13VMW,20VM
IY80	9-882-285-01	IC PRE AMP	LA70020	20VS
MS01	9-882-287-01	MODULE	SBX-1837	20VS only

REF.NO.	PART NO.	DESCRIPTION	SPEC	MODEL
<JACK>				
JP01	9-882-289-01	JACK PIN BOARD	YS01-9801A	13VM,13VMW,20VM
JP01	9-882-288-01	JACK PIN BOARD	YSC03P-2140-11A2	20VS
JP02	9-882-291-01	JACK PIN BOARD	YS01-9801B	13VM,13VMW,20VM
JP02	9-882-290-01	JACK PIN BOARD	YSC03P-4120-11A2	20VS
JP03	9-882-292-01	JACK EARPHONE	YSC-1538	
<COIL>				
L101	9-882-293-01	COIL PEAKING	56UH K (AXIAL 10.5MM)	
L102	9-882-293-01	COIL PEAKING	56UH K (AXIAL 10.5MM)	
L103	9-882-294-01	COIL SIF	TRF-5004C(STICK)	
L104	9-882-295-01	COIL CHOKE	TRF-9225A	
L107	9-882-293-01	COIL PEAKING	56UH K (AXIAL 10.5MM)	
L108	9-882-296-01	COIL VCO	K5705Z	
L110	9-882-297-01	COIL PEAKING	47UH K (AXIAL 3 5MM)	
L111	9-882-298-01	COIL PEAKING	12UH K (AXIAL 3.5MM)	
L113	9-882-309-01	COIL PEAKING	56UH K (AXIAL 3 5MM)	
L114	9-882-309-01	COIL PEAKING	56UH K (AXIAL 3 5MM)	
L202	9-882-310-01	COIL PEAKING	5.6UH K (AXIAL 3.5MM)	
L701	9-882-310-01	COIL PEAKING	5.6UH K (AXIAL 3.5MM)	
L702	9-882-309-01	COIL PEAKING	56UH K (AXIAL 3.5MM)	
L703	9-882-309-01	COIL PEAKING	56UH K (AXIAL 3 5MM)	
L704	9-882-311-01	COIL BEAD	HC-3550	
L705	9-882-311-01	COIL BEAD	HC-3550	
LU01	9-882-312-01	COIL PEAKING	10MH 5MM J RADIAL	
LU02	9-882-313-01	COIL PEAKING	100UH K (AXIAL 10 5MM)	
LU50	9-882-309-01	COIL PEAKING	56UH K (AXIAL 3 5MM)	20VS only
LU51	9-882-309-01	COIL PEAKING	56UH K (AXIAL 3 5MM)	20VS only
LU80	9-882-314-01	COIL PEAKING	10UH K (AXIAL 3 5MM)	20VS only
LU81	9-882-315-01	COIL PEAKING	10UH 10.5MM K (LAL04TB)	
LY01	9-882-309-01	COIL PEAKING	56UH K (AXIAL 3 5MM)	
LY02	9-882-309-01	COIL PEAKING	56UH K (AXIAL 3 5MM)	
LY03	9-882-309-01	COIL PEAKING	56UH K (AXIAL 3.5MM)	
TU01	9-882-316-01	COIL OSC	DE0-006	
<CONNECTOR & WAFER>				
P101	9-882-317-01	CONN WAFER	YW025-03	
P601	9-882-318-01	CONN WAFER	YAW025-03	
P602	9-882-318-01	CONN WAFER	YAW025-03	20VS only
PA802	9-884-603-01	CONNECTOR	YFH800-01+YPT018+ULW=250	
PA804	9-882-320-01	CONNECTOR	YH025-07+YST025+ULW=400	

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REF.NO.	PART NO.	DESCRIPTION	SPEC	MODEL
PA805	9-882-321-01	CONNECTOR	YH025-09+YST025+ULW=400	
PA806	9-882-321-01	CONNECTOR	YH025-09+YST025+ULW=400	
PA807	9-882-322-01	CONNECTOR	YH025-05+YST025+ULW=400	
PA901	9-882-324-01	CONNECTOR	SMH250-05+YBNT250+ULW=300	13VM,13VMW
PA901	9-882-323-01	CONNECTOR	SMH250-05+YBNT250+ULW=400	20VM,20VS
PAN01	9-882-325-01	CONNECTOR	60-8283-3078-45+ULW=100	
PAY03	9-882-326-01	CONNECTOR	60-8283-3068-45+USW=250	
PN02	9-882-327-01	CONN WAFER	TKC-G10P-A1	
PN03	9-882-328-01	CONN WAFER	TKC-G06P-A1	
PQ01	9-882-329-01	CONN WAFER	YAW025-09	
PY01	9-882-331-01	CONN HOUSING	00-8370-071-000-800	13VM,13VMW,20VM
PY01	9-882-330-01	CONN HOUSING	00-8370-101-000-800	20VS
PY07	9-882-332-01	CONN WAFER	YAW025-07	
<TRANSISTOR>				
QU01	9-882-085-01	TR	KTC3198Y	
QU02	9-882-333-01	TR	KTC3203-Y	
QU50	9-882-334-01	TR	KTA1266Y (TP)	20VS only
SN03	9-882-335-01	TR PHOTO	ST-5811	
SN04	9-882-335-01	TR PHOTO	ST-5811	
<RESISTOR>				
J281	9-882-361-01	R CARBON FILM	1/6 75 OHM J	
R116	9-882-336-01	R CARBON FILM	1/6 10K OHM J	
R127	9-882-337-01	R CARBON FILM	1/6 47K OHM J	
R209	9-882-338-01	R CARBON FILM	1/6 91K OHM J	
R361	9-882-092-01	R CARBON FILM	1/6 1K OHM J	
R362	9-882-092-01	R CARBON FILM	1/6 1K OHM J	
R363	9-882-339-01	R CARBON FILM	1/6 30K OHM J	
R462	Δ 9-882-339-01	R CARBON FILM	1/6 30K OHM J	13VM,13VMW
R462	Δ 9-882-340-01	R CARBON FILM	1/6 43K OHM J	20VM,20VS
R464	9-882-092-01	R CARBON FILM	1/6 1K OHM J	
R501	9-882-341-01	R CARBON FILM	1/4 360 OHM J	
R504	9-882-092-01	R CARBON FILM	1/6 1K OHM J	
R506	9-882-342-01	R CARBON FILM	1/6 1.2K OHM J	
R508	9-882-342-01	R CARBON FILM	1/6 1.2K OHM J	
R510	9-882-342-01	R CARBON FILM	1/6 1.2K OHM J	
R511	9-882-092-01	R CARBON FILM	1/6 1K OHM J	
R512	9-882-092-01	R CARBON FILM	1/6 1K OHM J	
R513	9-882-759-01	R CARBON FILM	1/6 620 OHM J	
R611	9-882-343-01	R CARBON FILM	1/6 470 OHM J	20VS only

REF.NO.	PART NO.	DESCRIPTION	SPEC	MODEL
R613	9-882-343-01	R CARBON FILM	1/6 470 OHM J	20VS only
R626	9-882-344-01	R CARBON FILM	1/4 4.7 OHM J	20VS only
R627	9-882-344-01	R CARBON FILM	1/4 4.7 OHM J	
R631	9-882-345-01	R CARBON FILM	1/2 100 OHM J	
R632	9-882-345-01	R CARBON FILM	1/2 100 OHM J	
R640	9-882-346-01	R CARBON FILM	1/6 75K OHM J	13VM,13VMW,20VM only
R642	9-882-336-01	R CARBON FILM	1/6 10K OHM J	20VS only
R716	9-882-093-01	R CARBON FILM	1/6 4.7K OHM J	
R720	9-882-093-01	R CARBON FILM	1/6 4.7K OHM J	
R721	9-882-092-01	R CARBON FILM	1/6 1K OHM J	
R722	9-882-092-01	R CARBON FILM	1/6 1K OHM J	
R730	9-882-092-01	R CARBON FILM	1/6 1K OHM J	
R731	9-882-336-01	R CARBON FILM	1/6 10K OHM J	
R742	9-882-347-01	R CARBON FILM	1/6 100K OHM J	
R744	9-882-337-01	R CARBON FILM	1/6 47K OHM J	
R748	9-882-348-01	R CARBON FILM	1/6 220 OHM J	
R750	9-882-348-01	R CARBON FILM	1/6 220 OHM J	
R763	9-882-093-01	R CARBON FILM	1/6 4.7K OHM J	
R781	9-882-092-01	R CARBON FILM	1/6 1K OHM J	
R783	9-882-092-01	R CARBON FILM	1/6 1K OHM J	
R784	9-882-092-01	R CARBON FILM	1/6 1K OHM J	
R785	9-882-092-01	R CARBON FILM	1/6 1K OHM J	
R786	9-882-337-01	R CARBON FILM	1/6 47K OHM J	
R789	9-882-092-01	R CARBON FILM	1/6 1K OHM J	
R794	9-882-349-01	R CARBON FILM	1/6 22K OHM J	
R797	9-882-092-01	R CARBON FILM	1/6 1K OHM J	
R798	9-882-092-01	R CARBON FILM	1/6 1K OHM J	
R7A1	9-882-347-01	R CARBON FILM	1/6 100K OHM J	
RA09	9-882-343-01	R CARBON FILM	1/6 470 OHM J	
RA12	9-882-348-01	R CARBON FILM	1/6 220 OHM J	
RA16	9-882-337-01	R CARBON FILM	1/6 47K OHM J	
RA17	9-882-758-01	R CARBON FILM	1/6 6.8K OHM J	20VS only
RA19	9-882-758-01	R CARBON FILM	1/6 6.8K OHM J	20VS only
RN01	9-882-350-01	R CARBON FILM	1/6 680 OHM J	
RN02	9-882-093-01	R CARBON FILM	1/6 4.7K OHM J	
RN04	9-882-349-01	R CARBON FILM	1/6 22K OHM J	
RN05	9-882-349-01	R CARBON FILM	1/6 22K OHM J	
RN07	9-882-349-01	R CARBON FILM	1/6 22K OHM J	
RN09	9-882-092-01	R CARBON FILM	1/6 1K OHM J	
RN10	9-882-092-01	R CARBON FILM	1/6 1K OHM J	
RN12	9-882-093-01	R CARBON FILM	1/6 4.7K OHM J	



REF.NO.	PART NO.	DESCRIPTION	SPEC	MODEL
RN13	9-882-092-01	R CARBON FILM	1/6 1K OHM J	20VS only
RN14	9-882-093-01	R CARBON FILM	1/6 4 7K OHM J	
RN18	9-882-349-01	R CARBON FILM	1/6 22K OHM J	
RN20	9-882-348-01	R CARBON FILM	1/6 220 OHM J	
RN24	9-882-345-01	R CARBON FILM	1/4 100 OHM J	
RN25	9-882-351-01	R CARBON FILM	1/6 150K OHM J	
RN28	9-882-093-01	R CARBON FILM	1/6 4.7K OHM J	
RN29	9-882-093-01	R CARBON FILM	1/6 4.7K OHM J	
RN34	9-882-336-01	R CARBON FILM	1/6 10K OHM J	
RN35	9-882-336-01	R CARBON FILM	1/6 10K OHM J	
RN37	9-882-352-01	R CARBON FILM	1/6 3.6K OHM J	
RN39	9-882-093-01	R CARBON FILM	1/6 4 7K OHM J	
RN44	9-882-353-01	R CARBON FILM	1/6 27K OHM J	
RN45	9-882-348-01	R CARBON FILM	1/6 220 OHM J	
RN49	9-882-093-01	R CARBON FILM	1/6 4 7K OHM J	
RN50	9-882-093-01	R CARBON FILM	1/6 4.7K OHM J	
RN51	9-882-093-01	R CARBON FILM	1/6 4 7K OHM J	
RN53	9-882-354-01	R CARBON FILM	1/6 100 OHM J	
RN56	9-882-350-01	R CARBON FILM	1/6 680 OHM J	
RN57	9-882-355-01	R M-OXIDE FILM	2W 3.9 OHM J	
RN58	9-882-093-01	R CARBON FILM	1/6 4.7K OHM J	
RN59	9-882-336-01	R CARBON FILM	1/6 10K OHM J	
RU01	9-882-347-01	R CARBON FILM	1/6 100K OHM J	
RU03	9-882-092-01	R CARBON FILM	1/6 1K OHM J	
RU08	9-882-354-01	R CARBON FILM	1/6 100 OHM J	
RU09	9-882-350-01	R CARBON FILM	1/6 680 OHM J	
RU17	9-882-356-01	R CARBON FILM	1/6 560 OHM J	
RU20	9-882-357-01	R CARBON FILM	1/6 2 2 OHM J	
RU21	9-882-357-01	R CARBON FILM	1/6 2.2 OHM J	
RU26	9-882-358-01	R CARBON FILM	1/6 330 OHM J	
RU55	9-882-092-01	R CARBON FILM	1/6 1K OHM J	20VS only
RU56	9-882-092-01	R CARBON FILM	1/6 1K OHM J	20VS only
RU57	9-882-092-01	R CARBON FILM	1/6 1K OHM J	20VS only
RU65	9-882-092-01	R CARBON FILM	1/6 1K OHM J	20VS only
RU66	9-882-359-01	R CARBON FILM	1/6 3 9K OHM J	20VS only
RU82	9-882-360-01	R CARBON FILM	1/6 2.2K OHM J	20VS only
RY09	9-882-093-01	R CARBON FILM	1/6 4.7K OHM J	
RY14	9-882-361-01	R CARBON FILM	1/6 75 OHM J	
RY15	9-882-361-01	R CARBON FILM	1/6 75 OHM J	
RY16	9-882-361-01	R CARBON FILM	1/6 75 OHM J	
RY18	9-882-092-01	R CARBON FILM	1/6 1K OHM J	

REF.NO.	PART NO.	DESCRIPTION	SPEC	MODEL
RY22	9-882-088-01	R CARBON FILM	1/6 1 8K OHM J	
RY24	9-882-347-01	R CARBON FILM	1/6 100K OHM J	
<SWITCH>				
SW01	9-882-362-01	SW DETECT	JDS1105-6X	
<CHIP CAPACITOR>				
CC102	9-882-363-01	C CHIP CERA	50V CH 100PF J 2012	
CC103	9-882-363-01	C CHIP CERA	50V CH 100PF J 2012	
CC104	9-882-363-01	C CHIP CERA	50V CH 100PF J 2012	
CC105	9-882-364-01	C CHIP CERA	50V X7R 0 01MF K 2012	
CC107	9-882-364-01	C CHIP CERA	50V X7R 0 01MF K 2012	
CC109	9-882-364-01	C CHIP CERA	50V X7R 0 01MF K 2012	20VS only
CC112	9-882-364-01	C CHIP CERA	50V X7R 0.01MF K 2012	
CC114	9-882-364-01	C CHIP CERA	50V X7R 0.01MF K 2012	
CC119	9-882-365-01	C CHIP CERA	50V X7R 1000PF K 2012	
CC121	9-882-364-01	C CHIP CERA	50V X7R 0.01MF K 2012	
CC123	9-882-365-01	C CHIP CERA	50V X7R 1000PF K 2012	13VM,13VMW,20VM only
CC125	9-882-366-01	C CHIP CERA	50V CH 47PF J 2012	
CC126	9-882-366-01	C CHIP CERA	50V CH 47PF J 2012	
CC127	9-882-364-01	C CHIP CERA	50V X7R 0 01MF K 2012	
CC129	9-882-367-01	C CHIP CERA	X7R 50V 2700PF K 2012	
CC131	9-882-366-01	C CHIP CERA	50V CH 47PF J 2012	
CC201	9-882-368-01	C CHIP TANTAL	35V 0.1MF M 3216	
CC202	9-882-374-01	C CHIP CERA	50V Y5V 0.1MF Z 2012	
CC205	9-882-369-01	C CHIP CERA	50V CH 330PF J 2012	
CC207	9-882-368-01	C CHIP TANTAL	35V 0.1MF M 3216	
CC208	9-882-365-01	C CHIP CERA	50V X7R 1000PF K 2012	
CC209	9-882-370-01	C CHIP CERA	50V X7R 0.047MF K 2012	
CC210	9-882-364-01	C CHIP CERA	50V X7R 0.01MF K 2012	
CC213	9-882-364-01	C CHIP CERA	50V X7R 0.01MF K 2012	
CC217	9-882-371-01	C CHIP TANTAL	6 3V 10MF M 3216	
CC363	9-882-372-01	C CHIP TANTAL	16V 2 2MF M 3216	
CC462	9-882-364-01	C CHIP CERA	50V X7R 0.01MF K 2012	
CC467	9-882-364-01	C CHIP CERA	50V X7R 0.01MF K 2012	
CC503	9-882-373-01	C CHIP CERA	50V CH 10PF D 2012	
CC506	9-882-374-01	C CHIP CERA	50V Y5V 0 1MF Z 2012	
CC508	9-882-374-01	C CHIP CERA	50V Y5V 0.1MF Z 2012	20VS only
CC510	9-882-374-01	C CHIP CERA	50V Y5V 0 1MF Z 2012	
CC511	9-882-364-01	C CHIP CERA	50V X7R 0.01MF K 2012	
CC606	9-882-374-01	C CHIP CERA	50V Y5V 0.1MF Z 2012	



REF.NO.	PART NO.	DESCRIPTION	SPEC	MODEL
CC607	9-882-375-01	C CHIP CERA	50V X7R 2200PF K 2012	20VS only
CC608	9-882-376-01	C CHIP CERA	50V X7R 0.022MF K 2012	20VS only
CC609	9-882-376-01	C CHIP CERA	50V X7R 0.022MF K 2012	20VS only
CC610	9-882-365-01	C CHIP CERA	50V X7R 1000PF K 2012	20VS only
CC611	9-882-377-01	C CHIP CERA	50V X7R 6800PF K 2012	20VS only
CC612	9-882-374-01	C CHIP CERA	50V Y5V 0.1MF Z 2012	20VS only
CC613	9-882-377-01	C CHIP CERA	50V X7R 6800PF K 2012	20VS only
CC614	9-882-374-01	C CHIP CERA	50V Y5V 0.1MF Z 2012	20VS only
CC615	9-882-378-01	C CHIP TANTAL	16V 1MF M 3216	20VS only
CC618	9-882-364-01	C CHIP CERA	50V X7R 0.01MF K 2012	20VS only
CC620	9-882-379-01	C CHIP CERA	50V CH 680PF J 2012	20VS only
CC633	9-882-365-01	C CHIP CERA	50V X7R 1000PF K 2012	20VM, 13VM, 13VMW
CC646	9-882-380-01	C CHIP CERA	50V CH 470PF J 2012	20VS only
CC647	9-882-380-01	C CHIP CERA	50V CH 470PF J 2012	
CC648	9-882-380-01	C CHIP CERA	50V CH 470PF J 2012	20VS only
CC649	9-882-380-01	C CHIP CERA	50V CH 470PF J 2012	
CC708	9-882-380-01	C CHIP CERA	50V CH 470PF J 2012	
CC709	9-882-374-01	C CHIP CERA	50V Y5V 0.1MF Z 2012	
CC714	9-882-364-01	C CHIP CERA	50V X7R 0.01MF K 2012	
CC715	9-882-363-01	C CHIP CERA	50V CH 100PF J 2012	
CC716	9-882-363-01	C CHIP CERA	50V CH 100PF J 2012	
CC717	9-882-374-01	C CHIP CERA	50V Y5V 0.1MF Z 2012	
CC719	9-882-364-01	C CHIP CERA	50V X7R 0.01MF K 2012	
CC720	9-882-364-01	C CHIP CERA	50V X7R 0.01MF K 2012	
CC721	9-882-381-01	C CHIP CERA	50V CH 18PF J 2012	
CC722	9-882-381-01	C CHIP CERA	50V CH 18PF J 2012	
CC723	9-882-382-01	C CHIP CERA	50V CH 22PF J 2012	
CC724	9-882-382-01	C CHIP CERA	50V CH 22PF J 2012	
CC725	9-882-374-01	C CHIP CERA	50V Y5V 0.1MF Z 2012	
CC729	9-882-378-01	C CHIP TANTAL	16V 1MF M 3216	
CC730	9-882-364-01	C CHIP CERA	50V X7R 0.01MF K 2012	
CC738	9-882-383-01	C CHIP CERA	50V X7R 560PF K 2012	
CC748	9-882-371-01	C CHIP TANTAL	6.3V 10MF M 3216	
CC749	9-882-374-01	C CHIP CERA	50V Y5V 0.1MF Z 2012	
CC750	9-882-391-01	C CHIP TANTAL	16V 4.7MF M 3216	
CCA01	9-882-364-01	C CHIP CERA	50V X7R 0.01MF K 2012	
CCA03	9-882-371-01	C CHIP TANTAL	6.3V 10MF M 3216	
CCA04	9-882-371-01	C CHIP TANTAL	6.3V 10MF M 3216	
CCA05	9-882-378-01	C CHIP TANTAL	16V 1MF M 3216	
CCA06	9-882-371-01	C CHIP TANTAL	6.3V 10MF M 3216	
CCA07	9-882-371-01	C CHIP TANTAL	6.3V 10MF M 3216	20VS only



REF.NO.	PART NO.	DESCRIPTION	SPEC	MODEL
CCA10	9-882-371-01	C CHIP TANTAL	6.3V 10MF M 3216	
CCN01	9-882-364-01	C CHIP CERA	50V X7R 0.01MF K 2012	
CCN02	9-882-364-01	C CHIP CERA	50V X7R 0 01MF K 2012	
CCN03	9-882-364-01	C CHIP CERA	50V X7R 0.01MF K 2012	
CCN04	9-882-364-01	C CHIP CERA	50V X7R 0 01MF K 2012	
CCN05	9-882-374-01	C CHIP CERA	50V Y5V 0 1MF Z 2012	20VS only
CCN10	9-882-376-01	C CHIP CERA	50V X7R 0.022MF K 2012	
CCN15	9-882-376-01	C CHIP CERA	50V X7R 0.022MF K 2012	
CCN16	9-882-365-01	C CHIP CERA	50V X7R 1000PF K 2012	
CCN17	9-882-364-01	C CHIP CERA	50V X7R 0.01MF K 2012	
CCN18	9-882-364-01	C CHIP CERA	50V X7R 0.01MF K 2012	
CCN20	9-882-375-01	C CHIP CERA	50V X7R 2200PF K 2012	
CCN23	9-882-384-01	C CHIP CERA	50V X7R 3300PF K 2012	
CCN26	9-882-376-01	C CHIP CERA	50V X7R 0.022MF K 2012	
CCN28	9-882-364-01	C CHIP CERA	50V X7R 0 01MF K 2012	
CCN45	9-882-364-01	C CHIP CERA	50V X7R 0 01MF K 2012	
CCU01	9-882-374-01	C CHIP CERA	50V Y5V 0 1MF Z 2012	
CCU04	9-882-374-01	C CHIP CERA	50V Y5V 0.1MF Z 2012	
CCU05	9-882-364-01	C CHIP CERA	50V X7R 0 01MF K 2012	
CCU06	9-882-374-01	C CHIP CERA	50V Y5V 0 1MF Z 2012	
CCU10	9-882-364-01	C CHIP CERA	50V X7R 0 01MF K 2012	
CCU12	9-882-365-01	C CHIP CERA	50V X7R 1000PF K 2012	
CCU14	9-882-384-01	C CHIP CERA	50V X7R 3300PF K 2012	
CCU17	9-882-364-01	C CHIP CERA	50V X7R 0 01MF K 2012	
CCU19	9-882-374-01	C CHIP CERA	50V Y5V 0.1MF Z 2012	
CCU20	9-882-365-01	C CHIP CERA	50V X7R 1000PF K 2012	
CCU24	9-882-364-01	C CHIP CERA	50V X7R 0.01MF K 2012	
CCU25	9-882-385-01	C CHIP CERA	50V X7R 0.033MF K 2012	
CCU26	9-882-374-01	C CHIP CERA	50V Y5V 0.1MF Z 2012	
CCU50	9-882-371-01	C CHIP TANTAL	6.3V 10MF M 3216	20VS only
CCU54	9-882-376-01	C CHIP CERA	50V X7R 0.022MF K 2012	20VS only
CCU57	9-882-364-01	C CHIP CERA	50V X7R 0.01MF K 2012	20VS only
CCU59	9-882-376-01	C CHIP CERA	50V X7R 0.022MF K 2012	20VS only
CCU62	9-882-376-01	C CHIP CERA	50V X7R 0.022MF K 2012	20VS only
CCU64	9-882-365-01	C CHIP CERA	50V X7R 1000PF K 2012	20VS only
CCU65	9-882-386-01	C CHIP CERA	50V X7R 4700PF K 2012	20VS only
CCU66	9-882-386-01	C CHIP CERA	50V X7R 4700PF K 2012	20VS only
CCU69	9-882-364-01	C CHIP CERA	50V X7R 0 01MF K 2012	20VS only
CCU71	9-882-364-01	C CHIP CERA	50V X7R 0 01MF K 2012	20VS only
CCU80	9-882-364-01	C CHIP CERA	50V X7R 0.01MF K 2012	20VS only
CCU82	9-882-374-01	C CHIP CERA	50V Y5V 0.1MF Z 2012	20VS only

REF.NO.	PART NO.	DESCRIPTION	SPEC	MODEL
CCU83	9-882-364-01	C CHIP CERA	50V X7R 0 01MF K 2012	20VS only
CCU85	9-882-374-01	C CHIP CERA	50V Y5V 0 1MF Z 2012	20VS only
CCU86	9-882-364-01	C CHIP CERA	50V X7R 0 01MF K 2012	20VS only
CCY01	9-882-378-01	C CHIP TANTAL	16V 1MF M 3216	
CCY02	9-882-370-01	C CHIP CERA	50V X7R 0 047MF K 2012	
CCY04	9-882-387-01	C CHIP CERA	50V CH 36PF J 2012	
CCY06	9-882-364-01	C CHIP CERA	50V X7R 0 01MF K 2012	
CCY07	9-882-388-01	C CHIP CERA	50V CH 390PF J 2012	
CCY09	9-882-389-01	C CHIP CERA	50V CH 200PF J 2012	
CCY10	9-882 390-01	C CHIP CERA	50V CH 33PF J 2012	
CCY11	9-882-390-01	C CHIP CERA	50V CH 33PF J 2012	
CCY12	9-882-378-01	C CHIP TANTAL	16V 1MF M 3216	
CCY13	9-882-378-01	C CHIP TANTAL	16V 1MF M 3216	
CCY14	9-882-391-01	C CHIP TANTAL	16V 4 7MF M 3528	
CCY15	9-882-378-01	C CHIP TANTAL	16V 1MF M 3216	
CCY16	9-882-371-01	C CHIP TANTAL	6 3V 10MF M 3216	
CCY19	9-882-374 01	C CHIP CERA	50V Y5V 0 1MF Z 2012	
CCY20	9-882-374-01	C CHIP CERA	50V Y5V 0 1MF Z 2012	
CCY21	9-882-364 01	C CHIP CERA	50V X7R 0 01MF K 2012	
CCY23	9-882-374-01	C CHIP CERA	50V Y5V 0 1MF Z 2012	
CCY24	9-882-378-01	C CHIP TANTAL	16V 1MF M 3216	
CCY26	9-882 374-01	C CHIP CERA	50V Y5V 0 1MF Z 2012	
CCY30	9-882-374-01	C CHIP CERA	50V Y5V 0 1MF Z 2012	
CCY33	9-882-376-01	C CHIP CERA	50V X7R 0 022MF K 2012	
CCY35	9-882-374-01	C CHIP CERA	50V Y5V 0 1MF Z 2012	
CCY36	9-882-364 01	C CHIP CERA	50V X7R 0 01MF K 2012	
CCY39	9 882-370-01	C CHIP CERA	50V X7R 0 047MF K 2012	
CCY40	9-882-376-01	C CHIP CERA	50V X7R 0 022MF K 2012	
CCY43	9-882-363 01	C CHIP CERA	50V CH 100PF J 2012	
CCY44	9-882-374-01	C CHIP CERA	50V Y5V 0 1MF Z 2012	
CCY78	9-882-374-01	C CHIP CERA	50V Y5V 0 1MF Z 2012	
CCY81	9-882-364-01	C CHIP CERA	50V X7R 0 01MF K 2012	
CCY82	9-882-364-01	C CHIP CERA	50V X7R 0 01MF K 2012	
CCY84	9-882-364-01	C CHIP CERA	50V X7R 0 01MF K 2012	
CCY86	9-882-374-01	C CHIP CERA	50V Y5V 0 1MF Z 2012	
CCY89	9-882-364-01	C CHIP CERA	50V X7R 0 01MF K 2012	
CCY90	9-882-374-01	C CHIP CERA	50V Y5V 0 1MF Z 2012	
CCY91	9-882-364 01	C CHIP CERA	50V X7R 0 01MF K 2012	
CCY92	9-882-374-01	C CHIP CERA	50V Y5V 0 1MF Z 2012	

REF.NO.	PART NO.	DESCRIPTION	SPEC	MODEL
<CHIP IC>				
IC702	9-885 003-55	IC CHIP OSD	M35041-107FP	for V-CHIP MODELS
IC702	9-882 392-01	IC CHIP OSD	M35041 095FP	for NON V-CHIP MODELS
IC703	9-882-393 01	IC CHIP CAPTION	Z86129	20VS only
ICU50	9-882-394 01	IC CHIP AUDIO	BH7804K	
ICY01	9-882 395 01	IC CHIP Y/C	LA71012AM	
ICY02	9-882 396 01	IC CHIP CCD	LC89962M	
IC701	9-884 275 01	IC MUCOM	SN37777MAA AA1	for NON V-CHIP MODELS
IC701	9-885 003-54	IC CHIP MICOM	SN37777MAA-AA3	for V-CHIP MODELS
<CHIP TRANSISTOR>				
QC101	9-882 397 01	TR CHIP	2SC2412K-T146-BR	20VS only
QC102	9-882 397 01	TR CHIP	2SC2412K T146-BR	20VS only
QC103	9-882 397 01	TR CHIP	2SC2412K T146-BR	
QC104	9-882-397 01	TR CHIP	2SC2412K T146-BR	
QC105	9-882-397-01	TR CHIP	2SC2412K-T146-BR	
QC201	9-882-397-01	TR CHIP	2SC2412K-T146-BR	
QC202	9-882-397-01	TR CHIP	2SC2412K-T146-BR	
QC461	9 882-397-01	TR CHIP	2SC2412K-T146-BR	
QC462	9-882 474-01	TR CHIP	2SA1037K-T145-R	
QC604	9-882 397 01	TR CHIP	2SC2412K T146-BR	
QC605	9-882-397 01	TR CHIP	2SC2412K T146-BR	
QC701	9-882-397-01	TR CHIP	2SC2412K T146 BR	20VS only
QC703	9-882-397-01	TR CHIP	2SC2412K-T146-BR	
QC704	9-882-397-01	TR CHIP	2SC2412K-T146-BR	
QC705	9-882-397-01	TR CHIP	2SC2412K-T146-BR	
QC706	9-882 397-01	TR CHIP	2SC2412K-T146-BR	
QC707	9-882 397 01	TR CHIP	2SC2412K-T146-BR	
QCA01	9-882 397 01	TR CHIP	2SC2412K-T146-BR	
QCN02	9-882 397-01	TR CHIP	2SC2412K T146-BR	
QCN03	9-882-397-01	TR CHIP	2SC2412K-T146-BR	
QCU03	9-882-397 01	TR CHIP	2SC2412K T146-BR	
QCU04	9 882-397 01	TR CHIP	2SC2412K T146-BR	20VS only
QCU05	9 882-474-01	TR CHIP	2SA1037K-T145-R	
QCY01	9 882-397-01	TR CHIP	2SC2412K-T146-BR	
QCY02	9 882-397-01	TR CHIP	2SC2412K-T146-BR	
QCY03	9 882 397-01	TR CHIP	2SC2412K-T146-BR	
QCY04	9-882 474-01	TR CHIP	2SA1037K-T146-R	
QCY05	9-882 474-01	TR CHIP	2SA1037K-T146-R	
QCY06	9-882 397-01	TR CHIP	2SC2412K-T145-BR	
<CHIP RESISTOR>				

REF.NO.	PART NO.	DESCRIPTION	SPEC	MODEL
RC101	9-882-475-01	R CHIP	1/10 1K OHM J 2012	
RC102	9-882-475-01	R CHIP	1/10 1K OHM J 2012	
RC103	9-882-475-01	R CHIP	1/10 1K OHM J 2012	
RC105	9-882-476-01	R CHIP	1/10 10K OHM J 2012	20VS only
RC106	9-882-476-01	R CHIP	1/10 10K OHM J 2012	20VS only
RC107	9-882-476-01	R CHIP	1/10 10K OHM J 2012	20VS only
RC108	9-882-476-01	R CHIP	1/10 10K OHM J 2012	20VS only
RC109	9-882-476-01	R CHIP	1/10 10K OHM J 2012	20VS only
RC111	9-882-477-01	R CHIP	1/10 4 7K OHM J 2012	20VS only
RC112	9-882-478-01	R CHIP	1/10 47K OHM J 2012	20VS only
RC113	9-882-476-01	R CHIP	1/10 10K OHM J 2012	20VS only
RC114	9 882-477-01	R CHIP	1/10 4 7K OHM J 2012	20VS only
RC117	9-882-479-01	R CHIP	1/10 82K OHM J 2012	
RC126	9-882-491-01	R CHIP	1/10 820 OHM J 2012	
RC129	9-882-475-01	R CHIP	1/10 1K OHM J 2012	
RC131	9-882-475-01	R CHIP	1/10 1K OHM J 2012	
RC132	9-882-481-01	R CHIP	1/10 330 OHM J 2012	
RC133	9-882-482-01	R CHIP	1/10 390 OHM J 2012	
RC135	9-882-475 01	R CHIP	1/10 1K OHM J 2012	
RC136	9-882-483 01	R CHIP	1/10 3 3K OHM J 2012	
RC137	9-882-484-01	R CHIP	1/10 33K OHM J 2012	
RC138	9-882-485-01	R CHIP	1/10 3K OHM J 2012	
RC139	9-882-486-01	R CHIP	1/10 22K OHM J 2012	20VS only
RC140	9-882-486-01	R CHIP	1/10 22K OHM J 2012	20VS only
RC141	9 882-487-01	R CHIP	1/10 1 5K OHM J 2012	20VS only
RC142	9-882-486-01	R CHIP	1/10 22K OHM J 2012	
RC201	9-882-488-01	R CHIP	1/10 510 OHM J 2012	
RC202	9-882-476-01	R CHIP	1/10 10K OHM J 2012	
RC203	9-882-488-01	R CHIP	1/10 510 OHM J 2012	
RC204	9-882-476-01	R CHIP	1/10 10K OHM J 2012	
RC205	9-882-488-01	R CHIP	1/10 510 OHM J 2012	
RC206	9-882-476-01	R CHIP	1/10 10K OHM J 2012	
RC207	9-882-475-01	R CHIP	1/10 1K OHM J 2012	
RC208	9-882-475-01	R CHIP	1/10 1K OHM J 2012	
RC210	9-882-760-01	R CHIP	1/10 75K OHM J 2012	
RC211	9-882-489-01	R CHIP	1/10 51K OHM J 2012	
RC212	9-882-490-01	R CHIP	1/10 150K OHM J 2012	
RC215	9-882-484-01	R CHIP	1/10 33K OHM J 2012	
RC216	9-882-491-01	R CHIP	1/10 820 OHM J 2012	
RC217	9-882-491-01	R CHIP	1/10 820 OHM J 2012	
RC218	9-882-475-01	R CHIP	1/10 1K OHM J 2012	



Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	SPEC	MODEL
RC219	9-882-493-01	R CHIP	1/10 360 OHM J 2012	
RC221	9-882-496-01	R CHIP	1/10 680 OHM J 2012	
RC364	Δ 9-882-500-01	R CHIP	1/10 2.7K OHM J 2012	
RC461	9-882-478-01	R CHIP	1/10 47K OHM J 2012	
RC465	9-882-478-01	R CHIP	1/10 47K OHM J 2012	
RC467	9-882-511-01	R CHIP	1/10 1.8K OHM J 2012	
RC468	9-882-493-01	R CHIP	1/10 360 OHM J 2012	
RC469	9-882-476-01	R CHIP	1/10 10K OHM J 2012	
RC470	9-882-494-01	R CHIP	1/10 240K OHM J 2012	
RC470	9-882-479-01	R CHIP	1/10 82K OHM J 2012	20VM,20VS
RC471	9-882-495-01	R CHIP	1/10 100K OHM J 2012	13VM,13VMW
RC472	9-882-479-01	R CHIP	1/10 82K OHM J 2012	
RC473	9-882-495-01	R CHIP	1/10 100K OHM J 2012	
RC475	9-882-478-01	R CHIP	1/10 47K OHM J 2012	
RC476	9-882-476-01	R CHIP	1/10 10K OHM J 2012	
RC502	9-882-483-01	R CHIP	1/10 3.3K OHM J 2012	
RC503	9-882-477-01	R CHIP	1/10 4.7K OHM J 2012	
RC505	9-882-508-01	R CHIP	1/10 560 OHM J 2012	13VM,13VMW
RC505	9-882-496-01	R CHIP	1/10 680 OHM J 2012	20VM,20VS
RC507	9-882-508-01	R CHIP	1/10 560 OHM J 2012	13VM,13VMW
RC507	9-882-496-01	R CHIP	1/10 680 OHM J 2012	20VM,20VS
RC509	9-882-508-01	R CHIP	1/10 560 OHM J 2012	13VM,13VMW
RC509	9-882-496-01	R CHIP	1/10 680 OHM J 2012	20VM,20VS
RC610	9-882-497-01	R CHIP	1/10 820K OHM J 2012	20VS only
RC615	9-882-475-01	R CHIP	1/10 1K OHM J 2012	20VS only
RC616	9-882-475-01	R CHIP	1/10 1K OHM J 2012	20VS only
RC617	9-882-476-01	R CHIP	1/10 10K OHM J 2012	20VS only
RC619	9-882-498-01	R CHIP	1/10 30K OHM J 2012	20VS only
RC622	9-882-476-01	R CHIP	1/10 10K OHM J 2012	
RC624	9-882-498-01	R CHIP	1/10 30K OHM J 2012	
RC633	9-882-499-01	R CHIP	1/10 75 OHM J 2012	
RC634	9-882-500-01	R CHIP	1/10 2.7K OHM J 2012	20VS only
RC635	9-882-500-01	R CHIP	1/10 2.7K OHM J 2012	
RC636	9-882-499-01	R CHIP	1/10 75 OHM J 2012	
RC637	9-882-500-01	R CHIP	1/10 2.7K OHM J 2012	20VS only
RC638	9-882-500-01	R CHIP	1/10 2.7K OHM J 2012	
RC641	9-882-501-01	R CHIP	1/10 7.5K OHM J 2012	20VS only
RC643	9-882-502-01	R CHIP	1/10 43K OHM J 2012	20VS only
RC644	9-882-502-01	R CHIP	1/10 43K OHM J 2012	
RC645	9-882-491-01	R CHIP	1/10 820 OHM J 2012	20VS only
RC647	9-882-491-01	R CHIP	1/10 820 OHM J 2012	



REF.NO.	PART NO.	DESCRIPTION	SPEC	MODEL
RC649	9 882-491-01	R CHIP	1/10 820 OHM J 2012	20VS only
RC651	9 882-491-01	R CHIP	1/10 820 OHM J 2012	
RC714	9-882-475 01	R CHIP	1/10 1K OHM J 2012	
RC715	9-882-475 01	R CHIP	1/10 1K OHM J 2012	
RC717	9-882-503 01	R CHIP	1/10 470 OHM J 2012	
RC718	9 882-504-01	R CHIP	1/10 6 8K OHM J 2012	
RC719	9-882-476-01	R CHIP	1/10 10K OHM J 2012	
RC723	9 882-475-01	R CHIP	1/10 1K OHM J 2012	
RC724	9-882-475 01	R CHIP	1/10 1K OHM J 2012	
RC725	9 882-505-01	R CHIP	1/10 2 2K OHM J 2012	
RC726	9-882-506 01	R CHIP	1/10 0 OHM 2012	
RC727	9 882-475-01	R CHIP	1/10 1K OHM J 2012	
RC728	9 882-475-01	R CHIP	1/10 1K OHM J 2012	
RC729	9 882-475-01	R CHIP	1/10 1K OHM J 2012	
RC732	9 882-475-01	R CHIP	1/10 1K OHM J 2012	
RC733	9-882-486 01	R CHIP	1/10 22K OHM J 2012	
RC734	9 882-475-01	R CHIP	1/10 1K OHM J 2012	
RC735	9-882-475 01	R CHIP	1/10 1K OHM J 2012	
RC736	9-882-475 01	R CHIP	1/10 1K OHM J 2012	
RC737	9-882 475-01	R CHIP	1/10 1K OHM J 2012	
RC738	9-882-477-01	R CHIP	1/10 4 7K OHM J 2012	
RC739	9-882 475-01	R CHIP	1/10 1K OHM J 2012	
RC740	9-882-476-01	R CHIP	1/10 10K OHM J 2012	
RC741	9-882-476-01	R CHIP	1/10 10K OHM J 2012	
RC743	9-882-476-01	R CHIP	1/10 10K OHM J 2012	
RC745	9-882-476 01	R CHIP	1/10 10K OHM J 2012	
RC746	9 882-503-01	R CHIP	1/10 470 OHM J 2012	
RC747	9 882-503-01	R CHIP	1/10 470 OHM J 2012	
RC749	9 882-477-01	R CHIP	1/10 4 7K OHM J 2012	
RC751	9 882-477-01	R CHIP	1/10 4 7K OHM J 2012	
RC752	9-882-480-01	R CHIP	1/10 220 OHM J 2012	
RC753	9-882-475-01	R CHIP	1/10 1K OHM J 2012	
RC754	9-882-477 01	R CHIP	1/10 4 7K OHM J 2012	
RC755	9-882-475 01	R CHIP	1/10 1K OHM J 2012	
RC756	9-882-477-01	R CHIP	1/10 4 7K OHM J 2012	
RC757	9-882-480-01	R CHIP	1/10 220 OHM J 2012	
RC758	9-882 480-01	R CHIP	1/10 220 OHM J 2012	
RC759	9-882-480-01	R CHIP	1/10 220 OHM J 2012	
RC760	9-882-480-01	R CHIP	1/10 220 OHM J 2012	
RC761	9-882-480-01	R CHIP	1/10 220 OHM J 2012	
RC764	9-882-486-01	R CHIP	1/10 22K OHM J 2012	

REF.NO	PART NO.	DESCRIPTION	SPEC	MODEL
RC765	9-882-480-01	R CHIP	1/10 220 OHM J 2012	
RC766	9-882-480 01	R CHIP	1/10 220 OHM J 2012	
RC770	9-882-478-01	R CHIP	1/10 47K OHM J 2012	
RC777	9-882-480-01	R CHIP	1/10 220 OHM J 2012	
RC778	9-882-480-01	R CHIP	1/10 220 OHM J 2012	
RC782	9-882-475 01	R CHIP	1/10 1K OHM J 2012	
RC787	9-882 475 01	R CHIP	1/10 1K OHM J 2012	
RC788	9-882-475-01	R CHIP	1/10 1K OHM J 2012	
RC790	9-882-495-01	R CHIP	1/10 100K OHM J 2012	
RC791	9-882 507-01	R CHIP	1/10 10M OHM J 2012	
RC792	9-882 508-01	R CHIP	1/10 560 OHM J 2012	
RC793	9-882-509-01	R CHIP	1/10 1M OHM J 2012	
RC795	9-882-486-01	R CHIP	1/10 22K OHM J 2012	
RC796	9-882 486-01	R CHIP	1/10 22K OHM J 2012	
RC799	9-882-476-01	R CHIP	1/10 10K OHM J 2012	
RC7A3	9-882-478-01	R CHIP	1/10 47K OHM J 2012	
RC7A4	9-882-510 01	R CHIP	1/10 100 OHM J 2012	
RCA02	9-882-475 01	R CHIP	1/10 1K OHM J 2012	
RCA04	9-882-510-01	R CHIP	1/10 100 OHM J 2012	
RCA06	9-882-475-01	R CHIP	1/10 1K OHM J 2012	20VS only
RCA14	9-882-475-01	R CHIP	1/10 1K OHM J 2012	
RCA15	9-882-475-01	R CHIP	1/10 1K OHM J 2012	
RCA18	9-882-486-01	R CHIP	1/10 22K OHM J 2012	20VS only
RCA21	9 882-486-01	R CHIP	1/10 22K OHM J 2012	20VS only
RCA22	9-882-511-01	R CHIP	1/10 1 8K OHM J 2012	
RCA23	9-882 480-01	R CHIP	1/10 220 OHM J 2012	
RCJ02	9-882 506-01	R CHIP	1/10 0 OHM 2012	
RCJ03	9-882-506-01	R CHIP	1/10 0 OHM 2012	
RCJ04	9-882-506-01	R CHIP	1/10 0 OHM 2012	20VS only
RCJ05	9-882-506-01	R CHIP	1/10 0 OHM 2012	
RCJ06	9-882-506-01	R CHIP	1/10 0 OHM 2012	
RCJ07	9-882 506-01	R CHIP	1/10 0 OHM 2012	
RCJ08	9-882-506-01	R CHIP	1/10 0 OHM 2012	
RCJ09	9-882-506 01	R CHIP	1/10 0 OHM 2012	
RCJ10	9-882-506 01	R CHIP	1/10 0 OHM 2012	
RCJ11	9-882-506 01	R CHIP	1/10 0 OHM 2012	
RCJ12	9-882-506 01	R CHIP	1/10 0 OHM 2012	
RCN08	9-882-506-01	R CHIP	1/10 0 OHM 2012	13VM,13VMW,20VM only
RCN08	9-882-486-01	R CHIP	1/10 22K OHM J 2012	
RCN15	9-882 477-01	R CHIP	1/10 4 7K OHM J 2012	
RCN16	9-882-475-01	R CHIP	1/10 1K OHM J 2012	

REF.NO.	PART NO.	DESCRIPTION	SPEC	MODEL
RCN17	9-882-477-01	R CHIP	1/10 4 7K OHM J 2012	
RCN22	9-882-477-01	R CHIP	1/10 4 7K OHM J 2012	
RCN23	9-882-476-01	R CHIP	1/10 10K OHM J 2012	
RCN26	9-882-490-01	R CHIP	1/10 150K OHM J 2012	
RCN27	9-882 486-01	R CHIP	1/10 22K OHM J 2012	
RCN30	9-882-511-01	R CHIP	1/10 1 8K OHM J 2012	
RCN31	9-882-511-01	R CHIP	1/10 1 8K OHM J 2012	
RCN32	9-882-476-01	R CHIP	1/10 10K OHM J 2012	
RCN33	9-882 476-01	R CHIP	1/10 10K OHM J 2012	
RCN36	9-882-477-01	R CHIP	1/10 4 7K OHM J 2012	
RCN40	9-882 476-01	R CHIP	1/10 10K OHM J 2012	
RCN41	9-882 476-01	R CHIP	1/10 10K OHM J 2012	
RCN42	9-882-476-01	R CHIP	1/10 10K OHM J 2012	
RCN43	9-882 478-01	R CHIP	1/10 47K OHM J 2012	
RCN46	9-882-512-01	R CHIP	1/10 27K OHM J 2012	
RCN47	9-882-480-01	R CHIP	1/10 220 OHM J 2012	
RCN48	9-882 475 01	R CHIP	1/10 1K OHM J 2012	
RCN52	9-882-483-01	R CHIP	1/10 3 3K OHM J 2012	
RCN54	9-882-477-01	R CHIP	1/10 4 7K OHM J 2012	
RCN55	9-882-476-01	R CHIP	1/10 10K OHM J 2012	
RCN60	9-882-477-01	R CHIP	1/10 4 7K OHM J 2012	
RCN61	9 882-477-01	R CHIP	1/10 4 7K OHM J 2012	
RCN62	9-882-477-01	R CHIP	1/10 4 7K OHM J 2012	
RCN63	9 882-477-01	R CHIP	1/10 4 7K OHM J 2012	
RCU02	9-882-513-01	R CHIP	1/10 120K OHM J 2012	20VS only
RCU02	9-882-484-01	R CHIP	1/10 33K OHM J 2012	13VM,13VMW,20VM
RCU04	9-882-514-01	R CHIP	1/10 2 2M OHM J 2012	
RCU05	9-882 515-01	R CHIP	1/10 12K OHM J 2012	
RCU06	9-882-516-01	R CHIP	1/10 5 6K OHM J 2012	
RCU07	9-882 500-01	R CHIP	1/10 2 7K OHM J 2012	
RCU10	9-882-487-01	R CHIP	1/10 1 5K OHM J 2012	
RCU11	9-882-512-01	R CHIP	1/10 27K OHM J 2012	
RCU12	9-882-517 01	R CHIP	1/10 330K OHM J 2012	
RCU13	9 882-476-01	R CHIP	1/10 10K OHM J 2012	
RCU14	9-882-504 01	R CHIP	1/10 6 8K OHM J 2012	
RCU15	9 882-515-01	R CHIP	1/10 12K OHM J 2012	
RCU16	9 882-518-01	R CHIP	1/10 150 OHM J 2012	
RCU18	9-882-519 01	R CHIP	1/10 47 OHM J 2012	
RCU19	9-882-475-01	R CHIP	1/10 1K OHM J 2012	
RCU22	9-882 476-01	R CHIP	1/10 10K OHM J 2012	
RCU23	9-882-476-01	R CHIP	1/10 10K OHM J 2012	

REF.NO.	PART NO.	DESCRIPTION	SPEC	MODEL
RCU24	9-882-476-01	R CHIP	1/10 10K OHM J 2012	
RCU25	9-882-476-01	R CHIP	1/10 10K OHM J 2012	
RCU27	9-882-503-01	R CHIP	1/10 470 OHM J 2012	
RCU50	9-882-476-01	R CHIP	1/10 10K OHM J 2012	20VS only
RCU51	9-882-520-01	R CHIP	1/10 18K OHM J 2012	20VS only
RCU53	9-882-476-01	R CHIP	1/10 10K OHM J 2012	20VS only
RCU54	9-882-520-01	R CHIP	1/10 18K OHM J 2012	20VS only
RCU58	9-882-478-01	R CHIP	1/10 47K OHM J 2012	20VS only
RCU59	9-882-512-01	R CHIP	1/10 27K OHM J 2012	20VS only
RCU60	9 882-512-01	R CHIP	1/10 27K OHM J 2012	20VS only
RCU61	9-882 521-01	R CHIP	1/10 3 9K OHM J 2012	20VS only
RCU62	9-882 508-01	R CHIP	1/10 560 OHM J 2012	20VS only
RCU63	9-882-521-01	R CHIP	1/10 3 9K OHM J 2012	20VS only
RCU64	9 882-508-01	R CHIP	1/10 560 OHM J 2012	20VS only
RCU81	9-882-475 01	R CHIP	1/10 1K OHM J 2012	20VS only
RCU83	9-882-492-01	R CHIP	1/10 1 2K OHM J 2012	20VS only
RCU84	9 882-478-01	R CHIP	1/10 47K OHM J 2012	20VS only
RCU85	9-882-503-01	R CHIP	1/10 470 OHM J 2012	20VS only
RCY01	9-882-475-01	R CHIP	1/10 1K OHM J 2012	
RCY02	9 882-475-01	R CHIP	1/10 1K OHM J 2012	
RCY03	9-882-503 01	R CHIP	1/10 470 OHM J 2012	
RCY04	9-882-475-01	R CHIP	1/10 1K OHM J 2012	
RCY05	9-882-503-01	R CHIP	1/10 470 OHM J 2012	
RCY06	9-882-477-01	R CHIP	1/10 4 7K OHM J 2012	
RCY07	9-882 492 01	R CHIP	1/10 1 2K OHM J 2012	
RCY08	9-882-505-01	R CHIP	1/10 2 2K OHM J 2012	
RCY10	9-882-522-01	R CHIP	1/10 1 2M OHM J 2012	
RCY11	9-882 497 01	R CHIP	1/10 820K OHM J 2012	
RCY12	9-882-505 01	R CHIP	1/10 2 2K OHM J 2012	
RCY13	9 882-480-01	R CHIP	1/10 220 OHM J 2012	
RCY19	9-882 514 01	R CHIP	1/10 2 2M OHM J 2012	
RCY20	9-882-487 01	R CHIP	1/10 1 5K OHM J 2012	
RCY21	9 882-505-01	R CHIP	1/10 2 2K OHM J 2012	
RCY23	9-882-523-01	R CHIP	1/10 8 2K OHM J 2012	
RCY25	9-882 476-01	R CHIP	1/10 10K OHM J 2012	
RCY26	9-882-477-01	R CHIP	1/10 4 7K OHM J 2012	
RCY27	9-882-523-01	R CHIP	1/10 8 2K OHM J 2012	
RCY50	9-882-475-01	R CHIP	1/10 1K OHM J 2012	
RCY80	9-882-475-01	R CHIP	1/10 1K OHM J 2012	
RCY81	9-882-478-01	R CHIP	1/10 47K OHM J 2012	
RCY82	9-882-478-01	R CHIP	1/10 47K OHM J 2012	

Les composants identifiés par
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sont critiques pour la securite
Ne les remplacer que par une
piece portant le numero specifie

The componants identified by
shading and mark Δ are criti-
cal for safety
Replace only with part number
specified



REF.NO.	PART NO.	DESCRIPTION	SPEC	MODEL
RCY83	9-882-478-01	R CHIP	1/10 47K OHM J 2012	
RCY84	9-882-478-01	R CHIP	1/10 47K OHM J 2012	
RCY85	9-882-520-01	R CHIP	1/10 18K OHM J 2012	
RCY88	9-882-511-01	R CHIP	1/10 1.8K OHM J 2012	
RCY89	9-882-503-01	R CHIP	1/10 470 OHM J 2012	
RCY90	9-882-503-01	R CHIP	1/10 470 OHM J 2012	
<CHIP CRYSTAL>				
XC702	9-822-524-01	CRYSTAL CHIP QUARTZ	32.768KHZ 20PPM 8038	
<MISCELLANEOUS>				
UT01	Δ 9-882-525-01	TUNER VARACTOR	TELH9-005A	
X401	9-882-526-01	RESONATOR CERA	CSB503F18	
X501	9-882-527-01	CRYSTAL QUARTZ	HC-49U 3.579545M (TP)	
X703	9-882-528-01	CRYSTAL QUARTZ	HC-49S 16.00000M 30PPM TP	
XY01	9-882-529-01	CRYSTAL QUARTZ	HC-49/U 3 579545MHZ 15PPM	
Z101	9-882-530-01	FILTER SAW	M1859M	
Z102	9-882-531-01	FILTER CERA	SFSH4 5MCB-TF21 (TP)	
Z103	9-882-532-01	FILTER CERA	TPS-4.5MB TRAP (TAPPING)	
<MECHANICAL COMPONENTS>				
M191	9-882-534-01	COVER TOP AS	7241900+7535500	
M191B	9-882-851-01	CLAMP WIRE	EGI T0.4+PVC COATING	
M192	9-882-537-01	DECK AS	DRN-7401	13VM,13VMW,20VM
M192	9-882-536-01	DECK AS	DRN-7604	20VS
M193	9-882-850-01	SHIELD TOP AS	7246900+7238900	
M193A	9-882-761-01	SCREW TAPPING	T2S TRS 4X16 MFZN BK	
M194	9-882-853-01	SHIELD CASE AS	7243900+6722900	
SN03A	9-882-539-01	HOLDER SENSOR	FR ABS	
SN04A	9-882-539-01	HOLDER SENSOR	FR ABS	
M382	9-882-756-01	FRAME MAIN PCB	FR HIPS BK	
M382B	9-882-852-01	CLAMP WIRE	NYLON 66	
I502	9-882-533-01	FILTER COMB	UGL-349KNT	
M191A	9-882-535-01	SCREW TAPPING	T2S WAS 3X10 MFZN	
M382A	9-882-535-01	SCREW TAPPING	T2S WAS 3X10 MFZN	
DN03A	9-882-757-01	HOLDER IR	ABS	

9-882-178-01	D MOUNT COMPLETE	D Assy for 13VM40 SVC		13VM
9-882-764-01	D MOUNT COMPLETE	D Assy for 13VM41 SVC		13VMW
9-882-179-01	D MOUNT COMPLETE	D Assy for 20VM40 SVC		20VM
9-882-180-01	D MOUNT COMPLETE	D Assy for 20VS40 SVC		20VS



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Replace only with part number
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REF.NO.	PART NO.	DESCRIPTION	SPEC	MODEL
<CAPACITOR>				
C301	9-882-181-01	C CERA	500V B 1000PF K (TAPPING)	
C302	9-882-182-01	C ELECTRO	35V RSS 1000MF (13X25) TP	
C304	9-882-183-01	C CERA	500V B 560PF K (TAPPING)	
C305	9-882-184-01	C MYLAR	100V 0 01MF J (TP)	
C306	9-882-185-01	C ELECTRO	35V RSS 100MF (8X11.5) TP	
C307	9-882-186-01	C ELECTRO	50V RT 1MF (6 3X11) TP	
C308	9-882-187-01	C ELECTRO	35V RSS 2200MF (16X31.5)	
C309	9-882-188-01	C MYLAR	100V 0 047MF J (TP)	
C310	9-882-190-01	C MYLAR	100V 0 056MF J (TP)	
C402	9-882-189-01	C CERA	500V B 0 01MF K	
C403	9-882-181-01	C CERA	500V B 1000PF K (TAPPING)	
C404	9-882-192-01	C CERA	500V B 220PF K (TAPPING)	
C405	Δ 9-882-191-01	C MYLAR	1.6KV BUP 7000PF J	20VM,20VS
C405	Δ 9-882-193-01	C MYLAR	1.6KV BUP 7200PF J	13VM,13VMW
C406	9-882-194-01	C MYLAR	100V EU 0.1MF J	
C407	9-882-195-01	C ELECTRO	250V RSS 10MF (10X20) TP	
C408	Δ 9-882-221-01	C ELECTRO	50V RSS 22MF (5X11) TP	
C410	9-882-196-01	C CERA AC	2KV B 1000PF K(TAPPING)	13VM,13VMW only
C411	Δ 9-882-197-01	C MYLAR	200V PU 0.33MF J	20VM,20VS
C411	Δ 9-882-198-01	C MYLAR	200V PU 0.47MF J	13VM,13VMW
C412	9-882-199-01	C ELECTRO	250V RSS 1MF (6.3X11)	
C413	9-882-200-01	C CERA	500V B 470PF K (TAPPING)	
C417	9-882-201-01	C ELECTRO	160V RSS 47MF (13X25) TP	
C801	Δ 9-882-202-01	C LINE ACROSS	WORLD AC250V 0.1UF M R.47	
C802	Δ 9-882-202-01	C LINE ACROSS	WORLD AC250V 0.1UF M R.47	
C803	9-882-205-01	C CERA AC	2.5KV 4700PF M KH DE1307	
C804	9-882-205-01	C CERA AC	2.5KV 4700PF M KH DE1307	
C805	9-882-205-01	C CERA AC	2.5KV 4700PF M KH DE1307	
C806	9-882-205-01	C CERA AC	2.5KV 4700PF M KH DE1307	
C807	9-882-205-01	C CERA AC	2.5KV 4700PF M KH DE1307	
C808	Δ 9-882-203-01	C ELECTRO	400V RSS 22MF (16X25) TP	
C809	9-882-161-01	C ELECTRO	25V RSS 47MF (5X11) TP	
C810	Δ 9-882-204-01	C ELECTRO	250V FHS 330MF (25X30)	
C811	Δ 9-882-845-01	C CERA AC	2.5KV 4700PF M KH DE1007	13VM,13VS only
C811	Δ 9-882-846-01	C CERA AC	2.5KV 3300PF M KH DE1007	20VM,20VS only
C813	9-882-206-01	C ELECTRO	100V RSS 3 3MF (5X11) TP	
C814	9-882-207-01	C ELECTRO	35V RUS 330MF (10X20) TP	
C815	9-882-208-01	C ELECTRO	25V RSS 470MF (10X16) TP	
C816	9-882-209-01	C MYLAR	630V PU 2200PF J	
C819	9-882-210-01	C CERA	50V B 1000PF K (TAPPING)	

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
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REF.NO.	PART NO.	DESCRIPTION	SPEC	MODEL
C820	9-882-208-01	C ELECTRO	25V RSS 470MF (10X16) TP	
C821	9-882-211-01	C ELECTRO	16V RSS 220MF (8X11 5) TP	
C822	9-882-212-01	C CERA SEMI	50V F 0.1MF Z (TAPPING)	
C823	9-882-226-01	C ELECTRO	RSS 16V 1000MF (10X20)	
C824	9-882-211-01	C ELECTRO	16V RSS 220MF (8X11 5) TP	
C825	9-882-213-01	C CERA SEMI	50V F 0.1MF Z	
C826	9-882-217-01	C ELECTRO	16V RSS 2200MF (13X25) TP	
C827	9-882-217-01	C ELECTRO	16V RSS 2200MF (13X25) TP	
C828	9-882-213-01	C CERA SEMI	50V F 0.1MF Z	
C830	9-882-208-01	C ELECTRO	25V RSS 470MF (10X16) TP	
C831	9-882-217-01	C ELECTRO	16V RSS 2200MF (13X25) TP	
C832	9-882-217-01	C ELECTRO	16V RSS 2200MF (13X25) TP	
C833	9-882-213-01	C CERA SEMI	50V F 0.1MF Z	
C834	9-882-214-01	C ELECTRO	50V RSS 470MF (13X20) TP	20VS only
C835	9-882-215-01	C ELECTRO	25V RSS 1000MF (13X20) TP	
C836	9-882-213-01	C CERA SEMI	50V F 0.1MF Z	
C837	9-882-231-01	C ELECTRO	16V RSS 470MF (10X12.5)TP	
C838	9-882-223-01	C CERA	2KV B 680PF K (TAPPING)	
C839	9-882-224-01	C ELECTRO	160V RSS 100MF (16X25) TP	
C840	9-882-224-01	C ELECTRO	160V RSS 100MF (16X25) TP	
C844	9-882-213-01	C CERA SEMI	50V F 0.1MF Z	
C845	9-882-212-01	C CERA SEMI	50V F 0.1MF Z (TAPPING)	
C846	9-882-221-01	C ELECTRO	50V RSS 22MF (5X11) TP	
C849	9-882-181-01	C CERA	500V B 1000PF K (TAPPING)	
C854	9-882-225-01	C ELECTRO	16V RSS 100MF (6.3X11) TP	20VS only
C858	9-882-223-01	C CERA	2KV B 680PF K (TAPPING)	
C860	9-882-223-01	C CERA	2KV B 680PF K (TAPPING)	
C862	9-882-223-01	C CERA	2KV B 680PF K (TAPPING)	
C864	9-882-226-01	C ELECTRO	16V RSS 1000MF (10X20) TP	20VS only
C865	9-882-226-01	C ELECTRO	16V RSS 1000MF (10X20) TP	
C866	9-882-213-01	C CERA SEMI	50V F 0.1MF Z	20VS only
C872	9-882-228-01	C ELECTRO	250V RSS 22MF (13X20) TP	
C877	9-882-751-01	C ELECTRO	25V RSS 2200MF (16X25) TP	
C878	9-882-225-01	C ELECTRO	16V RSS 100MF (6.3X11) TP	
C879	9-882-212-01	C CERA SEMI	50V F 0.1MF Z (TAPPING)	
C881	Δ 9-882-847-01	CAPRISTOR	MED-C471R1-2M	20VM,20VS only
C882	Δ 9-882-848-01	CAPRISTOR	MED-C471R1-2M	20VM,20VS only
C883	9-882-211-01	C ELECTRO	16V RSS 220MF (8X11 5)	20VM, 13VM, 13VMW







<DIODE>

D828	Δ 9-882-246-01	DIODE	FML-G16S	
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REF.NO.	PART NO.	DESCRIPTION	SPEC	MODEL
D301	9-882-177-01	DIODE	RGP15J	
D302	9-882-264-01	DIODE	1N4003 (TAPPING)	
D303	9-882-256-01	DIODE	1N4148 (TAPPING)	
D304	9-882-256-01	DIODE	1N4148 (TAPPING)	
D305	9-882-229-01	DIODE ZENER	UZ-33B	
D306	9-882-229-01	DIODE ZENER	UZ-33B	
D307	9-882-229-01	DIODE ZENER	UZ-33B	
D401	9-882-177-01	DIODE	RGP15J	
D402	 9-882-177-01	DIODE	RGP15J	
D403	9-882-237-01	DIODE	RGP02-16	13VM,13VMW only
D801	9-882-256-01	DIODE	1N4148 (TAPPING)	
D802	9-882-256-01	DIODE	1N4148 (TAPPING)	
D803	 9-882-238-01	DIODE BRIDGE	PBS606G	
D807	 9-882-239-01	DIODE	1S1888 (TAPPING)	
D808	 9-882-239-01	DIODE	1S1888 (TAPPING)	
D809	 9-882-239-01	DIODE	1S1888 (TAPPING)	
D810	 9-882-239-01	DIODE	1S1888 (TAPPING)	
D811	9-882-240-01	DIODE	RU 1P (TAPPING)	
D812	9-882-241-01	DIODE AVALANCHE	R 2-KY (TAPPING)	
D813	9-882-242-01	DIODE	1N4936GP (TAPPING)	
D814	9-882-177-01	DIODE	RGP15J	
D815	9-882-177-01	DIODE	RGP15J	
D816	9-882-177-01	DIODE	RGP15J	
D817	9-882-177-01	DIODE	RGP15J	
D818	9-882-243-01	DIODE	RGP30J	
D819	9-882-177-01	DIODE	RGP15J	
D820	9-882-243-01	DIODE	RGP30J	
D822	9-882-243-01	DIODE	RGP30J	
D823	9-882-243-01	DIODE	RGP30J	
D824	9-882-177-01	DIODE	RGP15J	20VS only
D825	9-882-243-01	DIODE	RGP30J	
D826	9-882-256-01	DIODE	1N4148 (TAPPING)	
D831	9-882-256-01	DIODE	1N4148 (TAPPING)	
D834	9-882-256-01	DIODE	1N4148 (TAPPING)	
D835	9-882-256-01	DIODE	1N4148 (TAPPING)	
D836	9-882-256-01	DIODE	1N4148 (TAPPING)	
D837	9-882-256-01	DIODE	1N4148 (TAPPING)	20VS only
D838	9-882-256-01	DIODE	1N4148 (TAPPING)	20VS only
D839	9-882-256-01	DIODE	1N4148 (TAPPING)	
D840	9-882-256-01	DIODE	1N4148 (TAPPING)	
D841	9-882-256-01	DIODE	1N4148 (TAPPING)	

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REF.NO.	PART NO.	DESCRIPTION	SPEC	MODEL
D844	9-882-256-01	DIODE	1N4148 (TAPPING)	
D845	9-882-245-01	DIODE ZENER	UZ-22BM	
D847	9-882-256-01	DIODE	1N4148 (TAPPING)	
D848	9-882-256-01	DIODE	1N4148 (TAPPING)	
D850	9-882-237-01	DIODE	RGP02-16	
D853	9-882-242-01	DIODE	1N4936GP (TAPPING)	
D856	9-882-264-01	DIODE	1N4003 (TAPPING)	
D857	9-882-256-01	DIODE	1N4148 (TAPPING)	
D858	9-882-256-01	DIODE	1N4148 (TAPPING)	20VS only
<FUSE>				
F801	Δ 9-882-247-01	FUSE GLASS TUBE	UL/CSA MF51 4A 125V NM	
<IC>				
I801	Δ 9-882-248-01	IC	TA8403K	
I801	Δ 9-882-249-01	IC POWER	STR-S5707	
I802	9-882-258-01	IC STAND BY	TOP210	
I811	Δ 9-882-250-01	IC REGULATOR	KIA7806PI	
I812	Δ 9-882-250-01	IC REGULATOR	KIA7806PI	
I813	Δ 9-882-259-01	IC REGULATOR	PQ09RF11	
I814	Δ 9-882-260-01	IC REGULATOR	PQ05RF11	
I815	Δ 9-882-261-01	IC REGULATOR	KA79L08AZ	20VS only
I816	Δ 9-882-263-01	IC REGULATOR	KIA7812PI	
I817	Δ 9-882-262-01	IC REGULATOR	PQ12RF11	
<COIL>				
L404	9-882-278-01	COIL CHOKE	CH-702G	
L405	9-882-752-01	COIL H-LINEARITY	L-125A	
L801	Δ 9-882-280-01	FILTER LINE	LF-30A1	
L802	9-882-311-01	COIL BEAD	HC-3550	
L803	9-882-311-01	COIL BEAD	HC-3550	
L817	9-882-281-01	COIL CHOKE	L-45S	
L818	9-882-311-01	COIL BEAD	HC-3550	
T401	9-882-282-01	TRANS DRIVE	HD-15D	
T402	Δ 9-882-283-01	FBT	FFA99312S	13VM,13VMW
T402	Δ 9-882-284-01	FBT	FFA99057M	20VM,20VS
T801	Δ 9-882-299-01	TRANS SMPS	TSM-4942A5	
T802	Δ 9-882-300-01	TRANS SMPS	ST-22A4	



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REF.NO.	PART NO.	DESCRIPTION	SPEC	MODEL
<CONNECTOR & WAFER>				
P401	9-882-301-01	CONN WAFER	CMI1506-0351MR	
P402	9-882-302-01	CONN WAFER	SMW250-04	
P804	9-882-303-01	CONN WAFER	YW025-07 (STICK)	
P805	9-882-304-01	CONN WAFER	YW025-09 (STICK)	
P806	9-882-304-01	CONN WAFER	YW025-09 (STICK)	
P807	9-882-305-01	CONN WAFER	YW025-05 (STICK)	
P903	9-882-148-01	CONN WAFER	YPW500-02	13VM,13VMW only
PWC01	Δ 9-882-754-01	CORD POWER AS	ME301P+TER=2100	13VM,20VM,20VS
PWC01	Δ 9-882-308-01	CORD POWER AS	WS-87 SPT2 125V10A L=2100	13VMW
N802	9-885-003-50	CONN WAFER	YFW800-02	
<TRANSISTOR>				
Q401	9-882-398-01	TR	KTC3207 (TP)	
Q402	Δ 9-882-399-01	TR	2SD2499	
Q811	9-882-334-01	TR	KTA1266Y (TP)	
Q813	9-882-334-01	TR	KTA1266Y (TP)	
Q803	9-882-400-01	TR	KTA 968-Y	
Q807	9-882-085-01	TR	KTC3198Y	
Q809	9-882-085-01	TR	KTC3198Y	
Q812	9-882-085-01	TR	KTC3198Y	
Q801	9-882-085-01	TR	KTC3203-Y	
Q802	9-882-085-01	TR	KTC3203-Y	
Q815	9-882-085-01	TR	KTC3203-Y	
<RESISTOR>				
R301	9-882-401-01	R FUSIBLE	1W 6.8 OHM J (TAPPING)	
R302	9-882-402-01	R CARBON FILM	1/4 1K OHM J	
R303	9-882-403-01	R CARBON FILM	1/4 22K OHM J	
R304	9-882-404-01	R CARBON FILM	1/4 220K OHM J	13VM,13VMW
R304	9-882-405-01	R CARBON FILM	1/4 240K OHM J	20VM,20VS
R305	9-882-406-01	R CARBON FILM	1/4 43K OHM J	
R306	9-882-407-01	R M-OXIDE FILM	2W 820 OHM J SMALL	
R307	9-882-408-01	R M-OXIDE FILM	2W 220 OHM J SMALL	
R309	9-882-409-01	R M-OXIDE FILM	2W 680 OHM J SMALL	
R310	9-882-402-01	R CARBON FILM	1/4 1K OHM J	
R311	9-882-410-01	R M-OXIDE FILM	2W 1 OHM J SMALL	
R312	9-882-411-01	R CARBON FILM	1/4 39K OHM J	
R313	9-882-412-01	R CARBON FILM	1/4 10K OHM J	
R401	9-882-457-01	R WIRE WOUND	2W 0.33 OHM F SMALL	20VM,20VS
R401	9-882-458-01	R WIRE WOUND	2W 0.4 OHM F SMALL	13VM,13VMW


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D

REF.NO.	PART NO.	DESCRIPTION	SPEC	MODEL
R402	9-882-413-01	R CARBON FILM	1/4 560 OHM J	
R403	Δ 9-882-414-01	R CEMENT	7W 5.6K OHM J 15MM 4P	
R404	9-882-457-01	R WIRE WOUND	2W 0.33 OHM F SMALL	20VM,20VS
R404	9-882-458-01	R WIRE WOUND	2W 0.4 OHM F SMALL	"13VM,13VMW"
R405	9-882-415-01	R FUSIBLE	1W 220 OHM J	
R406	9-882-416-01	R CARBON FILM	1/4 5.6K OHM J	
R407	9-882-417-01	R FUSIBLE	1W 1 OHM J (TAPPING)	
R408	Δ 9-882-418-01	R FUSIBLE	1W 0.68 OHM J (TAPPING)	
R409	Δ 9-882-419-01	R CARBON FILM	1/4 47K OHM J	
R410	Δ 9-882-420-01	R CARBON FILM	1/4 16K OHM J	
R411	9-882-421-01	R FUSIBLE	1W 68 OHM J (TAPPING)	
R412	9-882-422-01	R CARBON FILM	1/4 56K OHM J	20VM, 20VS
R412	9-882-424-01	R CARBON FILM	1/4 75K OHM J	13VM, 13VMW
R413	9-882-423-01	R CARBON FILM	1/4 51K OHM J	20VM,20VS
R413	9-882-424-01	R CARBON FILM	1/4 75K OHM J	13VM,13VMW
R414	9-828-425-01	R CARBON FILM	1/4 33K OHM J	
R416	9-882-426-01	R CARBON FILM	1/2 680 OHM J	
R418	9-882-427-01	R FUSIBLE	2W 6.8 OHM J (TAPPING)	13VM,13VMW only
R421	9-882-413-01	R CARBON FILM	1/4 560 OHM J	
R422	9-882-428-01	R CARBON FILM	1/4 100K OHM J	
R425	9-882-429-01	R M-OXIDE FILM	1W 9.1K OHM J TAPPING	
R801	Δ 9-882-430-01	POSISTOR	ECPAC7R0M140	
R802	Δ 9-882-431-01	R CEMENT	5W 1 OHM J BENCH 4P	
R803	Δ 9-882-431-01	R CEMENT	5W 1 OHM J BENCH 4P	
R805	9-882-432-01	R M-OXIDE FILM	2W 36K OHM J SMALL	
R806	9-882-433-01	R CARBON FILM	1/2 270K OHM J	
R807	Δ 9-882-434-01	R CARBON COMP	1/2 5.6M OHM K	
R809	9-882-435-01	R CARBON FILM	1/2 27 OHM J	
R810	9-882-428-01	R CARBON FILM	1/4 100K OHM J	
R811	Δ 9-882-436-01	R FUSIBLE	1W 33 OHM J (TAPPING)	
R812	9-882-437-01	R CARBON FILM	1/4 4.7K OHM J	
R813	9-882-438-01	R CARBON FILM	1/4 2.2K OHM J	
R814	9-882-439-01	R M-OXIDE FILM	1W 47 OHM J (TAPPING)	
R815	9-882-402-01	R CARBON FILM	1/4 1K OHM J	
R817	9-882-440-01	R FUSIBLE	2W 0.33 OHM J (TAPPING)	
R818	Δ 9-882-441-01	R CARBON COMP	1/2 2.2M OHM K	
R819	9-882-093-01	R CARBON FILM	1/6 4.7K OHM J	
R825	9-882-417-01	R FUSIBLE	1W 1 OHM J (TAPPING)	
R826	9-882-402-01	R CARBON FILM	1/4 1K OHM J	
R828	9-882-442-01	R CARBON FILM	1/4 39 OHM J	



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REF.NO.	PART NO.	DESCRIPTION	SPEC	MODEL
R830	9-882-444-01	R M-OXIDE FILM	2W 100K OHM J SMALL	
R831	9-882-445-01	R M-OXIDE FILM	3W 22K OHM J SMALL	
R833	9-882-446-01	R CARBON FILM	1/2 39 OHM J	
R834	9-882-437-01	R CARBON FILM	1/4 4.7K OHM J	
R839	9-882-421-01	R FUSIBLE	1W 0 47 OHM J (TAPPING)	20VS only
R840	9-882-412-01	R CARBON FILM	1/4 10K OHM J	
R841	9-882-412-01	R CARBON FILM	1/4 10K OHM J	
R842	9-882-437-01	R CARBON FILM	1/4 4 7K OHM J	
R843	9-885-003-56	R CARBON FILM	1/4 18K OHM J	
R849	9-882-419-01	R CARBON FILM	1/4 47K OHM J	20VM, 13VM, 13VMW
R856	9-882-438-01	R CARBON FILM	1/4 2 2K OHM J	
R858	9-882-449-01	R CARBON FILM	1/4 36K OHM J	
R859	9-882-437-01	R CARBON FILM	1/4 4 7K OHM J	
R860	9-885-003-57	R CARBON FILM	1/4 12K OHM J	
R861	9-882-412-01	R CARBON FILM	1/4 10K OHM J	
R863	9-882-437-01	R CARBON FILM	1/4 4.7K OHM J	
R864	9-882-449-01	R CARBON FILM	1/4 36K OHM J	
R868	9-882-438-01	R CARBON FILM	1/4 2.2K OHM J	
R869	9-882-451-01	R CARBON FILM	1/4 13K OHM J	
R870	9-882-423-01	R CARBON FILM	1/4 51K OHM J	
R871	9-882-423-01	R CARBON FILM	1/4 51K OHM J	
R874	9-882-447-01	R CARBON FILM	1/4 82K OHM J	
R875	9-882-448-01	R CARBON FILM	1/4 20K OHM J	
R876	9-882-412-01	R CARBON FILM	1/4 10K OHM J	
R877	9-882-336-01	R CARBON FILM	1/6 10K OHM J	
R878	9-882-336-01	R CARBON FILM	1/6 10K OHM J	
R881	9-882-419-01	R CARBON FILM	1/4 47K OHM J	
R896	9-882-452-01	R FUSIBLE	1W 0 27 OHM J (TP)	20VS only
R897	9-882-452-01	R FUSIBLE	1W 0 27 OHM J (TP)	
R898	9-882-453-01	R FUSIBLE	2W 4 3 OHM J (TAPPING)	
<RELAY>				
RLY01	 9-882-454-01	SW RELAY	DJ5D2-0(M)-0.25W	
RLY02	 9-882-455-01	SW RELAY	DG12D1-0(M)-II 1C-1P	
RLY03	 9-882-455-01	SW RELAY	DG12D1-0(M)-II 1C-1P	
<SWITCH>				
SW301	9-882-456-01	SW LEVER	JRS-1301	

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REF.NO.	PART NO.	DESCRIPTION	SPEC	MODEL
<MISCELLANEOUS>				
Z801	Δ 9-882-460-01	VARIATOR	SVC471D14A	
Z802	Δ 9-882-460-01	VARIATOR	SVC471D14A	
F801A	9-882-461-01	CLIP FUSE	PFC5000-0702	
F801B	9-882-461-01	CLIP FUSE	PFC5000-0702	
<MECHANICAL COMPONENTS>				
M201	9-885-003-46	MASK FRONT	FR HIPS BK V-Chip Ver	20VM
M201	9-885-003-47	MASK FRONT	FR HIPS BK V-Chip Ver	13VM
M201	9-885-003-48	MASK FRONT	FR HIPS BK V-Chip Ver	20VS
M201	9-885-003-49	MASK FRONT	FR HIPS WH080A V-Chip Ver	13VMW
M381	9-882-472-01	FRAME POWER	FR HIPS BK	
I301A		HEAT SINK	AL EX (D Board)	
I801A		HEAT SINK	A1050P-H24 T1.6 (D Board)	
I812A		HEAT SINK	AL EX BK (D Board)	
I817A		HEAT SINK	AL EX BK (D Board)	
D828A		HEAT SINK	AL EX (D Board)	
Q402A		HEAT SINK	AL EX (D Board)	
M231	9-882-468-01	HOLDER AC CORD	NYLON66 UL/CSA	
M351	9-882-469-01	HOLDER CORD	FR HIPS BK	13VM,20VM,20VS
M351	9-882-470-01	HOLDER CORD	FR HIPS WH	13VMW
M351A	9-882-471-01	SCREW TAPPING	T2S WAS 3X12 MFZN BK	
M682	9-884-611-01	CLAMP WIRE	NYLON 6 (VO)	
M381A	9-882-535-01	SCREW TAPPING	T2S WAS 3X10 MFZN	
I301B	9-882-762-01	SCREW TAPPTITE	TT2 RND 3X8 MFZN	
I801B	9-882-762-01	SCREW TAPPTITE	TT2 RND 3X8 MFZN	
I812B	9-882-466-01	SCREW TAPPTITE	TT2 RND 3X10 MFZN	
I817B	9-882-762-01	SCREW TAPPTITE	TT2 RND 3X8 MFZN	
Q402B	9-882-762-01	SCREW TAPPTITE	TT2 RND 3X8 MFZN	

	9-882-140-01	C MOUNT COMPLETE	C Assy for 13VM40, 13VM41 SVC	13VM,13VMW
	9-882-141-01	C MOUNT COMPLETE	C Assy for 20VM40, 20VS40 SVC	20VM,20VS
<CAPACITOR>				
C901	9-882-142-01	C ELECTRO	250V RUS 10MF (10*20) TP	
C902	9-882-750-01	C ELECTRO	250V RSS 47MF (16X25)	13VM,13VMW
C902	9-882-144-01	C ELECTRO	250V RUS 4.7MF 10*16	20VM,20VS
C903	9-882-145-01	C MYLAR	250V MEU 0.1MF K	
C908	9-882-146-01	C CERA	2KV B 2200PF K	
C911	9-882-145-01	C MYLAR	250V MEU 0.1MF K	20VM, 20VS
< CONNECTOR & WAFER >				
P901	9-882-147-01	CONN WAFER	SMW250-05	
P904	9-882-148-01	CONN WAFER	YPW500-02	13VM,13VMW only
PA402	9-882-150-01	CONNECTOR	SMH250-04+YBNH250+ULW=300	13VM,13VMW
PA402	9-882-149-01	CONNECTOR	SMH250-04+YBNH250+ULW=400	20VM,20VS
PA902	9-882-151-01	CONNECTOR	YFH800-01+YPT018+ULW=300	20VM,20VS only



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REF.NO.	PART NO.	DESCRIPTION	SPEC	MODEL
< RESISTOR >				
R901	9-882-152-01	R FUSIBLE	1W 0.82 OHM J	
R902	9-882-153-01	R CARBON FILM	1/4 100 OHM J	
R903	9-882-165-01	R CARBON FILM	1/2 560K OHM J	
R904	9-882-166-01	R CARBON COMP	1/2 1.5K OHM K	
R905	9-882-166-01	R CARBON COMP	1/2 1.5K OHM K	
R906	9-882-166-01	R CARBON COMP	1/2 1.5K OHM K	
R907		R CARBON FILM	1/2 220K OHM J	
R933	9-882-168-01	R CARBON FILM	1/2 6.8M OHM J	13VM,13VMW only
R934	9-882-168-01	R CARBON FILM	1/2 6.8M OHM J	13VM,13VMW only
R935		R CARBON FILM	1/2 270K OHM J	13VM,13VMW only
R936	9-882-170-01	R CARBON FILM	1/2 680K OHM J	13VM,13VMW only
R937	9-882-171-01	R SEMI FIXED	CET1214 2M OHM	13VM,13VMW only
R938	9-882-171-01	R SEMI FIXED	CET1214 2M OHM	13VM,13VMW only
R942	9-882-172-01	R CARBON FILM	1/4 1M OHM J	13VM,13VMW only
< MISCELLANEOUS >				
V902	△ 9-882-763-01	SOCKET CRT	CVT3210-0211M	13VM,13VMW
V902	△ 9-882-174-01	SOCKET CRT	CVT3245-0525	20VM,20VS
C910	9-882-175-01	C MYLAR	1KV BCP 0.047MF J	13VM,13VMW only
I901	△ 9-882-173-01	IC VIDEO	TDA6107Q	
I901A		HEAT SINK	A1050P-H24 T2.0 (C Board)	
I901B	9-882-762-01	SCREW TAPPTITE	TT2 RND 3X8 MFZN	
L901	9-882-176-01	COIL PEAKING	47UH J (RADIAL)	
D901	9-882-177-01	DIODE	RGP15J	
D902	9-882-242-01	DIODE	1N4936GP (TAPPING)	20VM, 20VS

9-882-079-01	MF MOUNT COMPLETE MF Assy for All Models SVC			
< CAPACITOR >				
CQ02	9-882-081-01	C ELECTRO	16V RSM 100MF (6.3X7) TP	
CQ01	9-882-080-01	C CERA	25V F 0.01MF Z (AXIAL)	
< LED >				
DQ01	9-882-082-01	LED	SLR-342VR (RED)	
DQ02	9-882-082-01	LED	SLR-342VR (RED)	
DQ03	9-882-082-01	LED	SLR-342VR (RED)	
< DIODE >				
DQ04	9-882-266-01	DIODE ZENER	MTZ 6.2-B (TAPPING)	
DQ05	9-882-266-01	DIODE ZENER	MTZ 6.2-B (TAPPING)	

REF.NO.	PART NO.	DESCRIPTION	SPEC	MODEL
< PREAMP >				
IQ01	9-882 083 01	IC PREAMP	GP1U27RM	
< CONNECTOR & WAFER >				
PAQ01	9-882 084 01	CONNECTOR	YH025 09+YST025+ULW=200	
< TRANSISTOR >				
QQ01	9-882 085 01	TR	KTC3198Y	
QQ02	9-882-085 01	TR	KTC3198Y	
QQ03	9-882 085-01	TR	KTC3198Y	
< RESISTOR >				
RQ15	9-882 092-01	R CARBON FILM	1/6 1K OHM J	
RQ16	9-882 092-01	R CARBON FILM	1/6 1K OHM J	
RQ17	9-882-092-01	R CARBON FILM	1/6 1K OHM J	
RQ18	9-882 092-01	R CARBON FILM	1/6 1K OHM J	
RQ03	9-882-087-01	R CARBON FILM	1/6 1 3K OHM J	
RQ10	9-882-087-01	R CARBON FILM	1/6 1 3K OHM J	
RQ04	9-882-088-01	R CARBON FILM	1/6 1 8K OHM J	
RQ11	9-882-088-01	R CARBON FILM	1/6 1 8K OHM J	
RQ07	9-882-091-01	R CARBON FILM	1/6 18K OHM J	
RQ14	9-882-091-01	R CARBON FILM	1/6 18K OHM J	
RQ05	9-882-089-01	R CARBON FILM	1/6 3K OHM J	
RQ12	9 882-089-01	R CARBON FILM	1/6 3K OHM J	
RQ13	9 882-089-01	R CARBON FILM	1/6 3K OHM J	
RQ21	9 882 093-01	R CARBON FILM	1/6 4 7K OHM J	
RQ22	9-882 093-01	R CARBON FILM	1/6 4 7K OHM J	
RQ23	9 882 093-01	R CARBON FILM	1/6 4 7K OHM J	
RQ06	9-882-090-01	R CARBON FILM	1/6 6 2K OHM J	
RQ02	9-882-086-01	R CARBON FILM	1/6 910 OHM J	
RQ09	9-882-086-01	R CARBON FILM	1/6 910 OHM J	
<SWITCH>				
SWQ01	9-882-094-01	SW TACT	SKHV10910A	
SWQ02	9-882-094-01	SW TACT	SKHV10910A	
SWQ03	9-882-094-01	SW TACT	SKHV10910A	
SWQ04	9-882-094-01	SW TACT	SKHV10910A	
SWQ05	9-882-094-01	SW TACT	SKHV10910A	
SWQ06	9-882 094-01	SW TACT	SKHV10910A	
SWQ07	9-882 094-01	SW TACT	SKHV10910A	
SWQ08	9-882 094-01	SW TACT	SKHV10910A	
SWQ09	9-882 094-01	SW TACT	SKHV10910A	



Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	SPEC	MODEL
SWQ10	9-882-094-01	SW TACT	SKHV10910A	
SWQ11	9-882-094-01	SW TACT	SKHV10910A	
SWQ12	9-882-094-01	SW TACT	SKHV10910A	
SWQ13	9-882-094-01	SW TACT	SKHV10910A	
SWQ14	9-882-094-01	SW TACT	SKHV10910A	

ACCESSORIES & OTHER PARTS				
00020	1-528-359-31	BATTERY	R6P/LN	
M801	9-882-127-01	BOX CARTON	DW-2	13VM
M801	9-882-128-01	BOX CARTON	DW-2	13VMW
M801	9-882-130-01	BOX CARTON	DW-2	20VM
M801	9-882-129-01	BOX CARTON	DW-2	20VS
M811	9-882-131-01	PAD	EPS 14H5	13VM,13VMW
M811	9-882-132-01	PAD	EPS 21H5	20VM,20VS
M821	9-882-133-01	BAG P.E	FOAM LEX 0.5T*1200*1150	20VM,20VS
M821	9-882-134-01	BAG PE	1000X950	13VM,13VMW
V01	Δ 8-451-418-72	COIL DY	Y14NDA	13VM,13VMW
V01	Δ 8-451-249-94	COIL DY	Y14NDA2 (SBN)	13VM,13VMW
V01	Δ 8-451-418-51	COIL DY	Y14NDA2 (SSI)	13VM,13VMW
V01	Δ 8-451-418-61	COIL DY	Y14NDA2 (TRV)	13VM,13VMW
V01	Δ 8-451-440-11	COIL DY	Y21NXA	20VM,20VS
V06	1-452-277-13	BMC MAGNET CP	CPM12	
V07	1-452-032-11	DISK MAGNET CP	FB1	
V08	X-4308-815-9	CRT PERMALLOY	13C33	
ZZ100	1-475-861-13	TRANSMITTER REMOCON	RM-Y153	13VM,20VM,20VM
ZZ100	1-475-862-13	TRANSMITTER REMOCON	RM-Y153W	13VMW
ZZ131	9-882-771-01	CRT GROUND NET	1403H-1015-1P	13VM,13VMW
ZZ131	9-882-772-01	CRT GROUND NET	2103H-1015-1P	20VM,20VS
L901	Δ 9-882-137-01	COIL DEGAUSSING	DC-2020	20VM,20VS
L901	Δ 9-882-138-01	COIL DEGAUSSING	DC-1420	13VM,13VMW
	9-884-613-01	Manual Instruction	English / French / Spanish	Non V-chip ver
M681	9-882-126-01	TIE CABLE	NYLON66 DA100	
M680	9-884-610-01	CABLE TIE	NYLON 66 368 MM	20VM,20VS only
P601A	9-882-135-01	CONNECTOR	YH025-03+35098+ULW=200	
P602A	9-882-135-01	CONNECTOR	YH025-03+35098+ULW=200	20VS only
00030	9-881-397-11	Manual Instruction	English / French / Spanish	V-chip ver

SECTION 10

APPENDIX (X-Ray)

ATTACHMENT J4

COMPONENT FAILURE DATA SHEET

Design-Center Chassis

Manufacturer: DAEWOO ELECTRONICS CO., LTD. IN MEXICO.

Chassis Family: S10D / S11A / S10A / S11C / S10E / S11D / S10H / S11F

CRT Type No.: A51LDG50X

Chassis Model No (s): KV-20VM40 / 20VS40 / 20VM42 / 20VS42

Circuit functional areas for Failure consideration	Component Failure (1)	Input Voltage	Minimum Beam Current		Intermediate Beam Currents						Maximum Beam Current		Maximum Radiation Measured (mR/hr)
					11		12		13				
			kV	μA	kV	μA	kV	μA	kV	μA	kV	μA	
1 Low voltage power supply a. D828	short	AC 100 - 130V	Unit shut down										No X-radiation
b.													
2 Horizontal drive & output a.													
b.													
3 High voltage power supply a.													
b.													
4 Hold-down/safety circuit a. R462	open	AC 100 - 130V	27.4	70	26.3	500	25.4	1000	24.3	1500	22.5	2400	Less than 0.1mR/hr
5 Other (identify)(2) a.													
b													

(1) Identify component failed and what was done, such as "R101-short"

(2) That not covered in 1 through 4 that maximizes potential radiation.

Manufacturer: DAEWOO ELECTRONICS CO., LTD. IN MEXICO.

Chassis Family: S10B / S11B / S10C / S10F / S11E / S10G

CRT Type No.: A34JBU70X

Chassis Model No (s): KV-13VM40 / 13VM41 / 13VM42 / 13VM43

Circuit functional areas for Failure consideration	Component Failure (1)	Input Voltage	Minimum Beam Current		Intermediate Beam Currents						Maximum Beam Current		Maximum Radiation Measured (mR/hr)
					11		12		13				
			kV	μA	kV	μA	kV	μA	kV	μA	kV	μA	
1 Low voltage power supply a. D828	short	AC 100 - 130V	Unit shut down										No X-radiation
b.													
2 Horizontal drive & output a.													
b.													
3 High voltage power supply a.													
b.													
4 Hold-down/safety circuit a. R462	open	AC 100 - 130V	25.4	140	24.7	500	23.7	1000	22.8	1000	21.5	2220	Less than 0.1mR/hr
5. Other (identify)(2) a.		"											
b		"											

(1) Identify component failed and what was done, such as "R101-short"

(2) That not covered in 1 through 4 that maximizes potential radiation.

